

Serial 09/486065  
Searcher: Jeanne Horrigan  
May 15, 2002

1

7/7/1 (Item 1 from file: 350)  
DIALOG(R) File 350: Derwent WPIX  
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012934159

WPI Acc No: 2000-106006/200009

**Bi-material single piece intraocular lens implant made of crosslinked acrylic polymer**

Patent Assignee: IOLTECHNOLOGIE-PRODN (IOLT-N); IOLTECHNOLOGIE PRODN SARL (IOLT-N)

Inventor: DEFFIEUX A ; DOLATKHANI M ; DOLTKHANI M

Number of Countries: 023 Number of Patents: 004

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 9965422	A1	19991223	WO 99FR1482	A	19990621	200009 B
FR 2779940	A1	19991224	FR 987778	A	19980619	200009
EP 1003446	A1	20000531	EP 99957013	A	19990621	200031
			WO 99FR1482	A	19990621	
CN 1272778	A	20001108	CN 99800970	A	19990621	200114

Priority Applications (No Type Date): FR 987778 A 19980619

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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WO 9965422	A1	F	23	A61F-002/16	
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Designated States (National): CA CN JP US

Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

FR 2779940	A1			A61F-002/16	
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EP 1003446	A1	F		A61F-002/16	Based on patent WO 9965422
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Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

CN 1272778	A			A61F-002/16	
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Abstract (Basic): WO 9965422 A1

NOVELTY - Single piece intraocular lens implant having a flexible central optical part and a rigid peripheral haptic part.

DETAILED DESCRIPTION - An implant forming an intraocular lens for the eye, in the form of a single-piece (monobloc) item with a central optical part made at least partially of flexible material and a peripheral haptic part made at least partially of rigid material.

USE - For implanting into the eye to replace defective natural lenses.

ADVANTAGE - The implants offer a good combination of flexibility, which enables the implant to be installed through a smaller incision in the eye than wholly rigid implants and thus reduces the risk of damage to the ocular tissue, and rigidity in the haptic part which facilitates stable positioning and anchoring of the implant.

pp; 23 DwgNo 0/0

Derwent Class: A14; A26; A96; D22; P32; P34

International Patent Class (Main): A61F-002/16

International Patent Class (Additional): A61L-027/00

7/7/2 (Item 1 from file: 371)  
000969702

*same patent as  
duplicate of 7/7/1 above*

Titre: IMPLANT FORMANT LENTILLE INTRAOCULAIRE MONOBLOC BI-MATERIAUX

Deposant: IOLTECHNOLOGIE PRODUCTION

Nom et Adresse du Deposant: IOLTECHNOLOGIE PRODUCTION (Societe a responsabilite limitee) - Deposant - RUE LA DESIREE LA VILLE EN BOIS 17000 LA ROCHELLE (FR-17000)

Nom Inventeurs: DOLTKHANI MARC - CO ENSCPB POLYMER EXPER AVE PEY BERLAND

BP 108 33402 TALENCE (FR-33402); DEFFIEUX ALAIN - 68 RUE VICTOR HUGO  
33200 BORDEAUX CAUDERAN (FR-33200)

Nom Mandataire: CABINET BONNET THIRION

Nature de Publication: Brevet

Information de Brevet et Priorites (Pays, Numero, Date):

Numero Publication: FR 2779940 - 19991224

Numero Depot: FR 987778 - 19980619

Priorites: FR 987778 - 19980619

Rapport de Recherche Preliminaire (Brevet/Reference, Code de Pertinence):

Cites dans le rapport de recherche

EP 492126 A (Cat. Y)

US 5674284 A (Cat. Y)

EP 637503 A (Cat. A)

US 4995879 A (Cat. A)

EP 590926 A (Cat. A)

US 4813956 A (Cat. A)

Resume:

Implant formant lentille intraoculaire comportant une partie optique centrale, a contour globalement circulaire, au moins partiellement en materiau souple et une partie haptique, en peripherie de ladite partie optique au moins partiellement en materiau rigide. La structure dudit implant est monobloc. Le materiau rigide de l'implant est une forme modifiee par au moins une voie choisie parmi les reactions chimiques et les reactions de polymerisation du materiau souple de depart, par exemple a base de PMMA-PHMA, reticules par ajout d'un agent multifonctionnel tel le dimethacrylate de diethyleneglycol.

Classification Internationale (Principale): A61F-002/16

Classification Internationale: A61L-027/00

Descripteurs Francais: LENTILLE INTRAOCULAIRE; STRUCTURE MONOBLOC;  
SOUPLESSE; CONTINUITE; POLYMERE; PREFORME; IMPREGNATION; USINAGE;  
POLYMERISATION; PROTECTION

Descripteurs Anglais: INTRAOCULAR LENS; ONE PIECE STRUCTURE; FLEXIBILITY;  
CONTINUITY; POLYMER; PREFORM; IMPREGNATION; MACHINING; POLYMERIZATION;  
PROTECTION

Forme Juridique (Type, Date de l'action, No. de BOPI, Description):

Publication 19991224 9951 Date de publication

Rapp de Rech 19991224 9951 Date de Rapport de Recherche

Revendic mod Revendication modifiee

Delivrance 20001103 0044 Date de delivrance

File 350:Derwent WPIX 1963-2001/UD,UM &UP=200230

File 344:CHINESE PATENTS ABS APR 1985-2002/APR

File 347:JAPIO Oct/1976-2001/Dec(Updated 020503)

File 371:French Patents 1961-2002/BOPI 200209

S1 3 AU='DOLATKHANI':AU='DOLATKHANI MARC'

S2 19 AU='DEFFIEUX':AU='DEFFIEUX ALAIN'

S3 22 AU='JAMES J V'

S4 59 AU='BAKER R L'

S5 2 AU='KRZYSKE D C'

S6 0 S1 AND S2 AND S3 AND S4 AND S5

S7 2 S1:S5 AND (IOL OR IOLS OR INTRA()OCULAR OR INTRAOCULAR)

\*\*\*\*\*

File 348:EUROPEAN PATENTS 1978-2002/May W01

File 349:PCT FULLTEXT 1983-2002/UB=20020509,UT=20020502

S1 3 AU='DOLATKHANI':AU='DOLATKHANI MARC'  
S2 21 AU='DEFFIEUX':AU='DEFFIEUX ALAIN'  
S3 14 AU='JAMES JOHN V':AU='JAMES JOHN VICTOR'  
S4 1 AU='KRZYSKE DENNIS CARL'  
S5 0 S1 AND S2 AND S3 AND S4  
S6 2 S1:S4 AND (IOL OR IOLS OR INTRA()OCULAR OR  
INTRAOCULAR) [duplicates]  
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File 155:MEDLINE(R) 1966-2002/May W1  
File 5:Biosis Previews(R) 1969-2002/May W2  
File 73:EMBASE 1974-2002/May W1  
File 34:SciSearch(R) Cited Ref Sci 1990-2002/May W2  
File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec  
S1 133 AU='DEFFIEUX A':AU='DEFFIEUX ALAIN'  
S2 4 AU='DOLATKHANI M'  
S3 12 AU='JAMES JV'  
S4 0 S1 AND S2 AND S3  
S5 145 S1:S3  
S6 8731 IOLS OR IOL  
S7 106042 INTRA()OCULAR OR INTRAOCULAR  
S8 0 S5 AND S6:S7  
\*\*\*\*\*

31/7/1 (Item 1 from file: 144)  
DIALOG(R)File 144:Pascal  
(c) 2002 INIST/CNRS. All rts. reserv.  
15515439 PASCAL No.: 02-0212029  
A concept for bifocal contact- Or intraocular lenses : Liquid single  
crystal hydrogels ("LSCH")  
AMIGO MELCHIOR A; FINKELMANN H  
Inst. Makromolekulare Chemie Univ., Freiburg im Brg D-77103, Denmark  
Journal: Polymers for Advanced Technologies, 2002, 13 (5) 363-369  
ISSN: 1042-7147 CODEN: PADTE5 Availability: INIST-XXXX  
No. of Refs.: 8 Refs.  
Document Type: P (Serial) ; A (Analytic)  
Country of Publication: United Kingdom  
Language: English  
The synthesis of liquid single crystal hydrogels ("LSCH") in suitable  
molds offers an innovative concept to realize bifocal contact- or  
intraocular - lenses . LSCH combine the properties required for  
applications as bifocal ophthalmic lenses: the soft and water-containing  
hydrogel enables oxygen permeation and exhibits high birefringence due to  
the liquid crystalline phase structure built up by rigid rod-like  
amphiphiles. Via a photo- initiated **crosslinking** reaction of aqueous  
solutions of monomeric lyotropic liquid crystalline amphiphiles in the  
macroscopically ordered liquid crystalline state, we obtain optically  
uniaxially ordered and transparent LSCH. The orientation process and the  
phase structure of the anisotropic hydrogel is analyzed by deuterium  
NMR-spectroscopy. Copyright (c) 2002 John Wiley & Sons, Ltd.  
31/3/2 (Item 1 from file: 8)  
DIALOG(R)File 8:Ei Compendex(R)  
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06040662 E.I. No: EIP02166922058

Author: Amigo-Melchior, Agustin; Finkelmann, Heino  
Corporate Source: Inst. Makromolekulare Chemie Univ., Freiburg im Brg  
D-77103, Denmark  
Source: Polymers for Advanced Technologies v 13 n 5 May 2002. p 363-369  
Publication Year: 2002  
ISSN: 1042-7147  
Language: English

36/7/2 (Item 2 from file: 155)

DIALOG(R) File 155:MEDLINE(R)

09857627 98304375 PMID: 9640193

Comparison of decentration and tilt between one piece and three piece polymethyl methacrylate intraocular lenses .

Hayashi K; Hayashi H; Nakao F; Hayashi F

Hayashi Eye Hospital, Fukuoka, Japan.

British journal of ophthalmology (ENGLAND) Apr 1998, 82 (4) p419-22,  
ISSN 0007-1161 Journal Code: 0421041

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

BACKGROUND: The extent of the decentration and tilt was prospectively compared between one piece polymethyl methacrylate (PMMA) and three piece PMMA intraocular lenses ( IOLs ) which were implanted in the capsular bag after performing continuous curvilinear capsulorhexis. METHODS: 91 patients underwent a one piece PMMA IOL implantation in one eye as well as the implantation of the three piece PMMA IOL with polyvinylidene fluoride loops in the opposite eye. The length of the lens decentration and the angle of the tilt were quantitated using the anterior eye segment analysis system (EAS-1000) at 1 week as well as 1, 3, and 6 months postoperatively. RESULTS: The mean length of the decentration in the one piece IOL was smaller than that in the three piece IOL at 1 week ( $p = 0.0092$ ), 1 month ( $p = 0.0044$ ), 3 months ( $p = 0.0069$ ), and 6 months ( $p = 0.0010$ ) postoperatively. However, no significant difference was found in the degree of the tilt between the two types of IOLs throughout the observation periods. CONCLUSION: These results clarified that **the one piece PMMA IOL with rigid PMMA haptics** implanted in the capsular bag provides a better centration than the three piece PMMA IOL with flexible haptics, whereas the tilt was the same between the two types of IOLs .

Record Date Created: 19980706

36/7/9 (Item 9 from file: 155)

DIALOG(R) File 155:MEDLINE(R)

08053052 94180341 PMID: 8133474

A new hydrogel intraocular lens design.

Barrett G D

Lions Eye Institute, Perth, Western Australia.

Journal of cataract and refractive surgery (UNITED STATES) Jan 1994,  
20 (1) p18-25, ISSN 0886-3350 Journal Code: 8604171

Document type: Clinical Trial; Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

A new hydrogel intraocular lens was designed to improve fixation and support. The lens, IOGEL model 2000S, has a 6.00 mm optic that merges via a crescentic flange into a terminal loop for an overall diameter of 12.00 mm.

The haptics are more flexible than existing loops and the design of the lens is based on a concept of minimum loop rigidity; that is, a haptic that is rigid enough to support the weight of a lens in aqueous within the capsular bag is considered adequate for modern cataract surgery. I evaluated the lens design's safety and efficacy. Excluding patients with pre-existing macular degeneration, the corrected acuity of all patients at last follow-up was 20/40 or better in 100%, 20/30 or better in 95%, 20/25 to 20/20 or better in 85%, and 20/15 or better in 15%. The new haptic can accommodate compression of the capsular bag and allows early, reliable fixation. The centration of the lens was excellent early in the postoperative period and later after capsular fibrosis developed.

Record Date Created: 19940421

36/7/16 (Item 16 from file: 155)  
DIALOG(R) File 155:MEDLINE(R)  
06874843 91192760 PMID: 2083907  
Artificial intraocular lenses ]  
Intraokulare Kunstlinsen.  
Skorpik C  
1. Universitäts-Augenklinik, Wien.  
Fortschritte der Ophthalmologie : Zeitschrift der Deutschen  
Ophthalmologischen Gesellschaft (GERMANY) 1990, 87 Suppl pS22-8, ISSN  
0723-8045 Journal Code: 8302807  
Document type: Journal Article; Review; Review, Tutorial ; English  
Abstract

Languages: GERMAN

Main Citation Owner: NLM

Record type: Completed

Nowadays the "method of choice" is to implant posterior chamber lenses after ECCE or phacoemulsification, but in the literature excellent results have also been reported with ICCE and anterior chamber lens implantation. To date, however, there have been no statistical data available in which these methods have been compared in a fair way. The best anterior chamber lenses seem to be semiflexible monoblock PMMA lenses with open loops (multiflex style). There should not be too much difference between the diameter of the IOL and the diameter of the anterior chamber. Rigid anterior chamber lenses (Choyce style) must be fitted very precisely to avoid complications. Lenses with closed loops (e.g., stable flex) have a very high complication rate and this implantation procedure should be discontinued. Lenses with inserted flexible open loops (e.g., Dubroff) have only been implanted in small series, but the results have been quite good. Follow-up investigations will show what the quality of this type of lens really is. Posterior chamber lenses are mostly implanted into the capsular sac. Only in special cases is sulcus implantation performed; the lens material is mostly PMMA. The loops are also made of PMMA and only rarely of prolene. **There is a trend to implant "one-piece lenses"--the optic and haptic are cut out of one piece of PMMA.** The rigidity of the loops and the loop configuration are important for centering the IOL and the stability in the sulcus or in the capsular sac. Mainly modified C-loops (Simcoe style) are used. With symmetric, complete capsular sac fixation, the results are very satisfactory. (ABSTRACT TRUNCATED AT 250 WORDS) (99 Refs.)

Record Date Created: 19910515

36/7/18 (Item 18 from file: 155)  
DIALOG(R) File 155:MEDLINE(R)  
06169627 89254361 PMID: 2722441

Relating the surface properties of intraocular lens materials to endothelial cell adhesion damage.

Mateo N B; Ratner B D

Department of Chemical Engineering, University of Washington, Seattle 98195.

Investigative ophthalmology & visual science (UNITED STATES) May 1989, 30 (5) p853-60, ISSN 0146-0404 Journal Code: 7703701

Contract/Grant No.: HL19419; HL; NHLBI; RR01296; RR; NCRR

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Relationships between corneal endothelial cell adhesion and intraocular lens ( IOL ) surface properties were studied to develop a lens surface with a lower potential to damage the corneal endothelium. The surfaces examined were poly(methyl methacrylate) (PMMA) and four types of plasma-deposited coatings on PMMA. These four films were prepared from perfluoropropane, ethylene oxide, 2-hydroxyethyl methacrylate (HEMA), and N-vinyl-2-pyrrolidone (NVP). These "monomers" were chosen to produce surfaces with a range in surface chemistry and surface energy. Each type of coating was characterized by electron spectroscopy for chemical analysis (ESCA) and contact angle techniques. In addition, these surfaces were contacted with rabbit corneal endothelium over a force range of 4000-20,000 dynes. The extent of endothelial cell damage was measured. Over the force range investigated, each modified surface was found to induce a significantly different degree of cell adhesion than that caused by PMMA. The perfluoropropane plasma film induced a constant lower degree of adhesion damage than the PMMA for all forces of contact. Although the HEMA and NVP hydrogel surfaces also induced lower adhesion damage than PMMA, the cell loss associated with each did increase as a function of force. The ethylene oxide film caused a significant increase in cell loss compared to the PMMA-induced losses. Based upon the correlation between the surface analysis data and the cell-surface contacting results, we suggest that a " soft " high-energy surface or a " rigid " low-energy surface is favorable for reduced cell adhesion. Also, the results indicate that cell adhesion increases for materials with increased hydrocarbon enrichment and for materials with lower (ether bonding)/(ester and ketone linkages) ratios.

Record Date Created: 19890626

36/7/21 (Item 21 from file: 155)

DIALOG(R) File 155:MEDLINE(R)

05418085 87169210 PMID: 3559947

Secondary intraocular lens implantation: rigid /semi- rigid versus flexible lenses.

Kraff M C; Lieberman H L; Sanders D R

Journal of cataract and refractive surgery (UNITED STATES) Jan 1987, 13 (1) p21-6, ISSN 0886-3350 Journal Code: 8604171

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Two series of secondary intraocular lens implantations with anterior chamber lenses are reported. Series 1 consisted of our first 199 consecutive procedures using rigid or semi- rigid lenses, performed between May 1, 1977, and September 30, 1982. Series 2 consisted of our first 101 consecutive procedures using flexible lenses, performed between

October 1, 1982, and October 30, 1984. Best-corrected final postoperative visual acuity was either better than or within one Snellen line of best-corrected preoperative vision in 84% of cases with rigid or semi-rigid lenses and in 85% of cases with flexible lenses. Surgical complications were minimal in both series. No instances of uveitis-glaucoma-hyphema syndrome were encountered. Endothelial cell loss was low. Because of the short follow-up in Series 2 and the fact that these groups were operated upon at different times, the two series are not directly comparable. Nonetheless, the results do show that secondary intraocular lens implantation is a viable alternative for aphakic patients, particularly those who are intolerant of aphakic spectacles and contact lenses. Certain provisos involving patient education and motivation as well as lens selection are noted in this report.

Record Date Created: 19870427

36/7/22 (Item 22 from file: 155)  
DIALOG(R) File 155:MEDLINE(R)  
05081685 86152838 PMID: 3879394  
Current and future concepts of the design of the intraocular lens .  
Jaffe N S  
Transactions of the ophthalmological societies of the United Kingdom ( ENGLAND) 1985, 104 (Pt 7) p703-14, ISSN 0078-5334 Journal Code: 0200570  
Document type: Journal Article  
Languages: ENGLISH  
Main Citation Owner: NLM  
Record type: Completed

Anterior chamber lenses are currently much less popular than posterior chamber lenses. They are mainly used in conjunction with intracapsular cataract extraction, as a secondary lens implant, and as a back up lens in case of intraoperative complications of extracapsular cataract extraction. A major disadvantage of anterior chamber lenses is improper sizing. Rigid lenses cause the greatest ocular tenderness and present serious problems with errors in sizing but they are the easiest to explant. Semiflexible and flexible lenses show a greater tendency to develop peripheral anterior synechiae. This makes explanation a very difficult procedure. Posterior chamber lenses are the most popular today. **There is a trend toward all-PMMA lenses because of concern over the biocompatibility of polypropylene.** The use of a laser ridge may inhibit posterior capsule opacification and facilitate YAG laser posterior capsulectomy. Ultraviolet blockers are being incorporated as a copolymer of a mechanical additive. There is a major trend towards capsular bag fixation of posterior chamber lenses as a result of complications associated with sulcus-fixated lenses. These include: disruption of the blood-aqueous barrier due to loop penetration of the ciliary body; chafing of the posterior surface of the iris leading to transillumination defects, microhyphaemas, and pigment dispersion glaucoma. It is predicted that the number of cataract extractions and the percentage of intraocular lens implantations will continue to increase due to demographic factors. Budgetary allocations for research and development will increase because of the involvement of some of the giants of medical industry. This will lead to new implant materials and new surgical techniques.

Record Date Created: 19860331

36/7/31 (Item 1 from file: 6)  
DIALOG(R) File 6:NTIS  
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1969970 NTIS Accession Number: PB96-872080

**Multifocal Lenses. (Latest citations from the U.S. Patent Bibliographic File with Exemplary Claims)**

(Published Search)

NERAC, Inc., Tolland, CT.

Corp. Source Codes: 103588000

Sponsor: National Technical Information Service, Springfield, VA.

Jul 96 50-250 citations

Languages: English Document Type: Bibliography; Patent

Journal Announcement: GRAI9621

Sponsored in part by National Technical Information Service, Springfield, VA.

Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)321-8547; and email at orders@ntis.fedworld.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.

NTIS Prices: PC N01/MF N01

Country of Publication: United States

The bibliography contains citations of selected patents concerning materials and manufacturing methods of multifocal lenses. References present the design of multifocal contact, ophthalmic, progressive, and intraocular lenses. Topics include far and near vision focus, rigid and soft lenses, visual focus control, lens simulation, and customized lenses. Lenses designed for optical scanner systems and data reading applications are included. (Contains 50-250 citations and includes a subject term index and title list.) (Copyright NERAC, Inc. 1995)

36/7/32 (Item 1 from file: 8)

DIALOG(R)File 8: Ei Compendex(R)

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03854212 E.I. No: EIP94051282786

Title: Development of a foldable composite hydrogel intraocular lens

Author: Osborn, D.C.; Vanderbilt, D.P.; Bedoya, J.H.; Green, G.F.

Corporate Source: Storz Instrument Co, St. Louis, MO, USA

Conference Title: Proceedings of the American Chemical Society Division of Polymeric Materials - Science and Engineering

Conference Location: Chicago, IL, USA Conference Date: 19930611

E.I. Conference No.: 19409

Source: Polymeric Materials Science and Engineering, Proceedings of the ACS Division of Polymeric Materials Science and Engineering v 69 1993. Publ by ACS, Books & Journals Division, Washington, DC, USA. p 422-423

Publication Year: 1993

ISSN: 0743-0515

Language: English

Document Type: CA; (Conference Article) Treatment: X; (Experimental); G; (General Review); A; (Applications)

Journal Announcement: 9406W3

Abstract: This paper describes the development of a foldable hydrogel lens by Storz Instrument Company. Such a lens would combine the improved biocompatibility of hydrogels with their ability to be folded and inserted through 3-4 mm incisions. A one-piece hydrogel composite IOL was developed consisting of a soft hydrogel optic capable of being folded so that the lens can be inserted through a 3-4 mm incision. The rigid PMMA haptic portion of the lens provides stability for the lens in the eye after insertion. Successful in vitro and in vivo preclinical test results demonstrate the safety and efficacy of the implant. 6 Refs.

36/7/33 (Item 2 from file: 8)



DIALOG(R) File 8: Ei Compendex(R)

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02098038 E.I. Monthly No: EIM8606-039900

Title: INTRAOCULAR LENS LOOP MATERIALS: COMPARISON OF MECHANICAL STRESS AND PHOTO-OXIDATIVE PROPERTIES OF POLYPROPYLENE AND POLYMETHYLMETHACRYLATE MONOFILAMENTS.

Author: Osborn, D. C.; Yalon, M.; Stacholy, J.; Goldberg, E. P.

Corporate Source: Univ of Florida, Gainesville, FL, USA

Conference Title: Biomaterials '84: Transactions - Second World Congress on Biomaterials, 10th Annual Meeting of the Society for Biomaterials, Sixteenth International Biomaterials Symposium.

Conference Location: Washington, DC, USA Conference Date: 19840427

Sponsor: Natl Inst of Dental Research, Bethesda, MD, USA; FDA, Natl Cent for Devices & Radiological Health, Rockville, MD, USA; Office of Naval Research, USA; US Army Inst of Dental Research, USA; NBS, Washington, DC, USA; et al

E.I. Conference No.: 07929

Source: Transactions of the Annual Meeting of the Society for Biomaterials in conjunction with the International Biomaterials Symposium v 7. Publ by Soc for Biomaterials, San Antonio, TX, USA p 75

Publication Year: 1984

CODEN: TAMSEN

Language: English

Document Type: PA; (Conference Paper)

Journal Announcement: 8606

Abstract: Because of excellent optical properties and biocompatibility in the eye, polymethylmethacrylate (PMMA) has been used for several decades as the optical material of choice for intraocular lens ( IOL ) implants. Polypropylene (PP) has been used with great success as a suture material (e. g. in cardiovascular surgery) since the 1960s and for IOL loops since the mid-70s. However, there has been an interest in recent years in PMMA itself as the IOL haptic material. The long-term mechanical stability of a rigid polymer such as PMMA for a flexible stress-bearing implant device is of concern as is the possible photo-oxidation of PP in the eye. The study reported here was therefore conducted to evaluate the relative photo-oxidative and mechanical stress stability of PMMA and PP. Data for PP biocompatibility in the anterior chamber were also obtained for one year rabbit implants.

36/7/35 (Item 2 from file: 73)

DIALOG(R) File 73: EMBASE

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04192356 EMBASE No: 1990074898

A randomized prospective clinical comparison of HEMA (IOGEL(R)) and PMMA intraocular lenses

Sveinsson O.; Seland J.

Department of Ophthalmology, University of Bergen, Bergen Norway

Acta Ophthalmologica ( ACTA OPHTHALMOL. ) (Denmark) 1990, 68/SUPPL. 195 (43-47)

CODEN: ACOPA ISSN: 0001-639X

DOCUMENT TYPE: Journal; Conference Paper

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

The aim of this prospective study was to compare the clinical efficiency of two different kinds of intraocular lenses . By randomization, 40 patients received an intraocular lens either made of HEMA (hydroxyethylmethacrylate) or PMMA (Polymethylmethacrylate). 20 Patients

were assigned to each group. Age varied from 60 to 79 years. Follow up period was 12 months. Posterior synechiae were more frequent in the PMMA group. This was statistically significant. One week postoperatively slightly more intraocular reaction was observed in the HEMA group. On the other hand PMMA lenses had higher incidence of precipitates. These differences however were not found to be statistically significant. The analysis showed no difference in the visual acuity ratings in the groups at 12 months (VA 6/9 or better in 95%). Our conclusion is that the soft HEMA lens is a safe alternative to the rigid PMMA lens and probably more biocompatible to the eye.

36/7/43 (Item 4 from file: 94)  
DIALOG(R)File 94:JICST-EPlus  
(c)2002 Japan Science and Tech Corp(JST). All rts. reserv.  
01731846 JICST ACCESSION NUMBER: 93A0413109 FILE SEGMENT: JICST-E  
**Biomaterials and Functional Properties. Artificial Lens (Contact Lens and Intraocular Lens ).**  
YOKOYAMA YUICHI (1); YAMAUCHI AIZO (1)  
(1) HOYA Corp.  
Zairyo Kagaku(Journal of the Materials Science Society of Japan), 1993,  
VOL.30,NO.1, PAGE.15-25, FIG.5, TBL.7, REF.27  
JOURNAL NUMBER: G0788AAN ISSN NO: 0388-3930  
UNIVERSAL DECIMAL CLASSIFICATION: 617.7-089 681.7.06  
LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan  
DOCUMENT TYPE: Journal  
ARTICLE TYPE: Commentary  
MEDIA TYPE: Printed Publication

36/7/44 (Item 1 from file: 35)  
DIALOG(R)File 35:Dissertation Abs Online  
(c) 2002 ProQuest Info&Learning. All rts. reserv.  
1058583 ORDER NO: AAD89-08260  
SYNTHESIS AND CHARACTERIZATION OF OCULAR IMPLANT POLYMERS: HYDROGELS AND RELATED POLYMERS  
Author: LUO, CHING-WANG  
Degree: PH.D.  
Year: 1988  
Corporate Source/Institution: THE UNIVERSITY OF FLORIDA (0070)  
CHAIRMAN: EUGENE P. GOLDBERG  
Source: VOLUME 50/01-B OF DISSERTATION ABSTRACTS INTERNATIONAL.  
PAGE 261. 227 PAGES

Cataract surgery is one of the most common surgical procedures, and almost every cataract procedure is combined with intraocular lens ( IOL ) implantation. **The studies presented in this dissertation were designed to obtain better understanding of current IOL materials and to develop new and better materials for IOLs .**

Soft or flexible ocular implants offer several possible advantages over traditional hard acrylic (PMMA) IOLs . Hydrogels are among the best candidate materials for this application. Relationships between hydrogel composition and physical properties were studied. A major objective was to find compositions with improved strength and elasticity . Monomers studied included 2-hydroxyethylmethacrylate (HEMA), N-vinylpyrrolidone (NVP), methylmethacrylate (MMA), hydroxypropylacrylate (HPA), hydroxypropylmethacrylate (HPMA), and dimethylaminoethylmethacrylate (DMAEMA). Multiparameter empirical equations were developed to predict the water content and tensile strength of HEMA-NVP-MMA hydrogels.

Hydrogels possessing a unique combination of high tensile strength ( $>300$  psi) and rapid recovery from elastic deformation were discovered within very narrow specific ranges of composition. These results provide the basis for development of several strong hydrogels which can be folded without tearing and display rapid and complete elastic recovery after bending. The ocular implant biocompatibility of selected hydrogel compositions was also studied using rabbit implant models. Results indicate that suitable IOL implants with good ocular biocompatibility could be prepared from these materials.

Ultraviolet absorbing IOLs are widely used. New UV absorbing phenothiazine monomers were covalently bound to IOL polymers to produce stable lens materials. The vinyl phenothiazines are an improved class of UV absorbers. As little as 0.3 wt% of phenothiazine monomers was required to achieve UV absorbing PMMA and hydrogel materials comparable to the natural human lens in UV absorption.

The properties of additional IOL materials of clinical importance were studied. Flexural fatigue and hydrogel graft coating thickness studies indicated promise for optical microscopy and stress-optical methods of characterization. Poly(vinylidene fluoride) (PVDF) fibers exhibited superior flex fatigue properties compared to PMMA.

File 155:MEDLINE(R) 1966-2002/May W1  
File 144:Pascal 1973-2002/May W2  
File 5:Biosis Previews(R) 1969-2002/May W2  
File 6:NTIS 1964-2002/May W3  
File 2:INSPEC 1969-2002/May W2  
File 8:Ei Compendex(R) 1970-2002/May W2  
File 99:Wilson Appl. Sci & Tech Abs 1983-2002/Apr  
File 238:Abs. in New Tech & Eng. 1981-2002/May  
File 65:Inside Conferences 1993-2002/May W2  
File 77:Conference Papers Index 1973-2002/Mar  
File 73:EMBASE 1974-2002/May W1  
File 34:SciSearch(R) Cited Ref Sci 1990-2002/May W2  
File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec  
File 94:JICST-EPlus 1985-2002/Mar W4  
File 35:Dissertation Abs Online 1861-2002/Apr  
S1 11701 IOL OR IOLS  
S2 29233 (INTRA()OCULAR OR INTRAOCULAR)()LENS??  
S3 7390 HAPTIC??  
S4 349529 FLEXIBLE  
S5 784730 ELASTIC???  
S6 3774 MALLEABLE  
S7 2411 PLIABLE  
S8 792996 SOFT OR BEND????  
S9 234703 RIGID  
S10 30726 STIFF  
S11 322850 HARD  
S12 106998 FIRM  
S13 3 IMMALLEABLE OR IMPLIABLE  
S14 3429 INFLEXIBLE OR UNFLEXIBLE  
S15 141085 INELASTIC  
S16 507 UNBEND????  
S17 298900 CROSS()LINK???? OR **CROSSLINK**????  
S18 281893 MODIFY???  
S19 2504764 MODIFI???????  
S20 6374031 CHANG???

S21 2953707 ALTER?????  
S22 923331 VARY???  
S23 6801382 VARI???  
S24 8620560 STRUCTUR???  
S25 31949 S1:S2  
S26 1853263 S4:S8  
S27 826906 S9:S16  
S28 754973 S17 OR S18:S23(3N)S24  
S29 109 S25 AND S26 AND S27  
S30 3 S28 AND S29  
S31 2 RD (unique items)  
S32 106 S29 NOT S30  
S33 22 S32/2002 OR S32/2001 OR S32/2000 OR S32/1999  
S34 11 RD (unique items)  
S35 84 S32 NOT S33  
S36 45 RD (unique items)  
S37 40 S36 AND S26(S)S27  
\*\*\*\*\*

35/3,AB/1 (Item 1 from file: 442)

DIALOG(R)File 442:AMA Journals

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00055131

Side-View Analysis of the Lens: II. Positioning of Intraocular Lenses (Article)

Assia, Ehud I.; MD; Apple, David J.; MD

Archives of Ophthalmology

1992; 110: 94 (4)

The uveoscleral window technique is useful for studying the position and fixation of posterior chamber intraocular lenses (IOLs). Studies using this technique show that the configuration of an IOL in the capsular bag largely depends on three factors: size, shape, and relative rigidity of the IOL. The general configuration of the capsular bag is that of a flattened saucer created by radial expansion of the haptic. Zonules at the fixation are relaxed, eliminating the possibility of accommodation with this IOLs. Downsized IOLs (total diameter of 12.0 mm) provided stable fixation with less tension on the capsule than larger IOLs.

The haptics of all capsular IOLs (looped, one-piece plated, one-block, and compressible-disc...

40/3,AB/6 (Item 1 from file: 442)

DIALOG(R)File 442:AMA Journals

(c)2002 Amer Med Assn -FARS/DARS apply. All rts. reserv.

00096568 COPYRIGHT American Medical Association 1995

Dystrophic Calcification of an Implanted Hydroxyethylmethacrylate Intraocular Lens (ARTICLE)

BUCHER, PIUS J. M.; BUCHI, ERNST R.; DAICKER, BASIL C.

Archives of Ophthalmology

Nov, 1995; Clinicopathologic Report: tzh1431

LINE COUNT: 00360

Hydroxyethylmethacrylate is a biomaterial still under clinical trial for use in foldable intraocular lenses. We observed a patient in whom a geographic opacification developed within an implanted hydroxyethylmethacrylate lens, together with granular deposits on the posterior lens capsule and in the scar of a paracentesis. The intraocular lens and posterior lens capsule were removed because of

impaired visual acuity. Light and scanning electron microscopy disclosed nodular calcifications within the intraocular lens and granular, partially crystalline, calcifications on the posterior lenscapsule. Energy-dispersive x-ray analysis and x-ray diffraction showed the deposits in the intraocular lens to consist of calcium hydroxyapatite. We presume this mineralization to be dystrophic, with calcium derived from lens remnants and phosphorus possibly derived from a thymoxamine solution used briefly during the cataract operation. Our observation suggests caution in the use of phosphated solutions together with hydroxyethylmethacrylate intraocular lenses and may warrant reconsideration of the suitability of hydroxyethylmethacrylate intraocular lenses, should additional similar cases be reported. (Arch Ophthalmol. 1995;113:1431-1435)

40/3/1 (Item 1 from file: 16)  
DIALOG(R)File 16:Gale Group PROMT(R)  
(c) 2002 The Gale Group. All rts. reserv.  
02449377 Supplier Number: 43228489 (USE FORMAT 7 FOR FULLTEXT)  
Several Factors Influence IOL Selection: Design, material more important as newer techniques become more popular  
Ophthalmology Times, p11  
August 15, 1992  
Language: English Record Type: Fulltext  
Document Type: Magazine/Journal; Trade  
Word Count: 722  
Surgical technique, implant shape and size, and haptic configuration should determine which IOL is selected, said Leon C. LaHaye, MD, in private practice...

40/3/3 (Item 3 from file: 16)  
DIALOG(R)File 16:Gale Group PROMT(R)  
(c) 2002 The Gale Group. All rts. reserv.  
01751228 Supplier Number: 42194358 (USE FORMAT 7 FOR FULLTEXT)  
Capsulorhexis Deformation Method Confirms IOL's Fit in Bag  
Ophthalmology Times, p10  
July 1, 1991  
Language: English Record Type: Fulltext  
Document Type: Magazine/Journal; Trade  
Word Count: 679  
... Dr. Corydon and his colleagues tested three IOL styles: a "more rigid," one-piece lens with an overall diameter of 13.75 mm; a multipiece lens with an overall diameter of 13.75 mm; and a shorter-diameter, 12-mm IOL with flexible loops (the 808, an IOL designed specifically for the capsular bag).

40/3/4 (Item 4 from file: 16)  
DIALOG(R)File 16:Gale Group PROMT(R)  
(c) 2002 The Gale Group. All rts. reserv.  
01429076 Supplier Number: 41710909 (USE FORMAT 7 FOR FULLTEXT)  
Proper-size IOL Reduces Chance Of Peripheral Anterior Synechiae  
Ophthalmology Times, p10  
Dec 1, 1990  
Language: English Record Type: Fulltext  
Document Type: Magazine/Journal; Trade  
Word Count: 515  
The Delaware study showed that regardless of whether the lens had a loop or footplate haptic, or was flexible or rigid, peripheral anterior

synechia formation was strongly associated with length. But...

40/3,K/5 (Item 1 from file: 636)  
DIALOG(R)File 636:Gale Group Newsletter DB(TM)  
(c) 2002 The Gale Group. All rts. reserv.  
01000071 Supplier Number: 40253788 (USE FORMAT 7 FOR FULLTEXT)  
POLYMERS IN OPHTHALMIC SURGERY  
Biomedical Polymers, v3, n9, pN/A  
Jan, 1988  
Language: English Record Type: Fulltext  
Document Type: Magazine/Journal; Trade  
Word Count: 2237

... surface is prone to coating with inflammatory debris.

Lens supporting structures

Lens supporting structures (the haptics ) have shown greater variation in design and composition than the lens optic. They usually comprise...

...and fix it in the eye. **Steel, nylon, polypropylene and PMMA have been used as haptic materials.** Many early IOLs had nylon haptics . However, it soon became apparent that they were prone to biodegradation and their use has...

...broke, resulting in lens instability.

**Polypropylene, at present, is still the most popular material for IOL haptics .** 3-0 polypropylene loops are sufficiently flexible to insert into the eye and mould into its permanent site, but rigid enough to handle and support the lens optic. There has been some evidence of surface...  
...but this does not appear to be significant, particularly with the larger gauge used for haptics . Also, the majority of these haptics are hidden behind the iris, protecting them from uv exposure, a possible contribution to biodegradation.

**More recently, PMMA haptics have been developed. The haptic is continuous with the PMMA optic giving a true one-piece IOL. With other types of IOL the lens optic is drilled and the haptic inserted into the hole...**

File 98:General Sci Abs/Full-Text 1984-2002/Apr  
File 9:Business & Industry(R) Jul/1994-2002/May 14  
File 16:Gale Group PROMT(R) 1990-2002/May 14  
File 160:Gale Group PROMT(R) 1972-1989  
File 148:Gale Group Trade & Industry DB 1976-2002/May 15  
File 621:Gale Group New Prod.Annou.(R) 1985-2002/May 14  
File 636:Gale Group Newsletter DB(TM) 1987-2002/May 14  
File 441:ESPICOM Pharm&Med DEVICE NEWS 2002/May W2  
File 20:Dialog Global Reporter 1997-2002/May 15  
File 813:PR Newswire 1987-1999/Apr 30  
File 15:ABI/Inform(R) 1971-2002/May 14  
File 88:Gale Group Business A.R.T.S. 1976-2002/May 14  
File 442:AMA Journals 1982-2002/May B2  
File 444:New England Journal of Med. 1985-2002/May W2  
File 457:The Lancet 1986-2000/Oct W1  
S1 5337 IOL OR IOLS  
S2 4866 (INTRA()OCULAR OR INTRAOCULAR)()LENS??  
S3 1749 HAPTIC??  
S4 847688 FLEXIBLE  
S5 72522 ELASTIC???  
S6 8752 MALLEABLE

S7 5649 PLIABLE  
 S8 961103 SOFT OR BEND????  
 S9 150382 RIGID  
 S10 124364 STIFF  
 S11 2466513 HARD  
 S12 4272885 FIRM  
 S13 3 IMMALLEABLE OR IMPLIABLE  
 S14 29191 INFLEXIBLE OR UNFLEXIBLE  
 S15 6588 INELASTIC  
 S16 2666 UNBEND????  
 S17 31099 CROSS() LINK???? OR **CROSSLINK**????  
 S18 261674 MODIFY???  
 S19 751703 MODIFI??????  
 S20 8270261 CHANG???  
 S21 2090001 ALTER??????  
 S22 723874 VARY???  
 S23 5372733 VARI????  
 S24 2850208 STRUCTUR???  
 S25 8675 S1:S2  
 S26 1831838 S4:S8  
 S27 6580553 S9:S16  
 S28 67 S25(S) S26(S) S27  
 S29 1 S28 AND S17  
 S30 0 S28 AND S18(S) S24  
 S31 1 S28 AND S19(S) S24  
 S32 1 S28 AND S20(S) S24  
 S33 0 S28 AND S21(S) S24  
 S34 3 S29 OR S31 OR S32  
**S35 3 RD (unique items)**  
 S36 64 S28 NOT S35  
 S37 11 S36/2002 OR S36/2001 OR S36/2000 OR S36/1999  
 S38 53 S36 NOT S37  
 S39 47 RD (unique items)  
**S40 6 S3 AND S39**  
 \*\*\*\*\*

31/7/1 (Item 1 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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014333729 \*\*Image available\*\*

WPI Acc No: 2002-154432/200220

Anterior chamber iris fixated intraocular lens for refractive correction in phakic eyes, comprises optic portion, haptic elements, and iris fixation clamp

Patent Assignee: BAUSCH & LOMB INC (BAUL ); BAUSCH & LOMB SURGICAL INC (BAUL )

Inventor: HAGEMEIERS C J; HOFFMANN L; HSING W; STENGER D C; WILDE E T

Number of Countries: 086 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200187188	A2	20011122	WO 2001US14195	A	20010503	200220 B
AU 200159384	A	20011126	AU 200159384	A	20010503	200222

Priority Applications (No Type Date): US 2000570721 A 20000515

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200187188	A2	E	30	A61F-002/16	

Designated States (National): AE AL AM AT AU AZ BA BB BG BR BY CA CH CN

CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP  
KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE  
SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LU  
MC NL PT SE TR

AU 200159384 A A61F-002/16 Based on patent WO 200187188

Abstract (Basic): WO 200187188 A2

NOVELTY - An anterior chamber iris fixated intraocular lens comprises an outer peripheral edge defining an optic portion (28), two or more haptic elements (32) connected to the outer peripheral edge (30), and an iris fixation clamp (38) formed in a peak of each haptic element. The iris fixation clamp separates to allow a folded implantation through small incision.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:

(A) a method of manufacturing an intraocular lens ; and

(B) a method of using the intraocular lens . The lens is manufactured by forming a disk, and machining the lens in the disk. The lens is molded and removed from the mold. The lens is used by creating an incision in a cornea of an eye, inserting the lens in an anterior chamber of the eye, and securing the lens within the anterior chamber.

USE - Useful as intraocular lenses for refractive correction in phakic eyes.

ADVANTAGE - The design of the inventive intraocular lens eliminates haptic contact and movement in the angle of the anterior chamber and eliminates axial displacement of lens optic portion along the optical axis of the eye when compressive forces are exerted against the outer edges. This design results to achieving more certain refractive correction and reducing the risk of delicate tissue damage.

DESCRIPTION OF DRAWING(S) - The drawing shows a plan view of the inventive intraocular lens with two haptics .

Optic portion (28)

Outer peripheral edge (30)

Haptic elements (32)

Iris fixation clamp (38)

pp; 30 DwgNo 2/14

Derwent Class: A96; D22; P32

International Patent Class (Main): A61F-002/16

31/7/2 (Item 2 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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014326805 \*\*Image available\*\*

WPI Acc No: 2002-147508/200219

Intraocular lens for use in anterior chamber for phakic refractive lenses, includes rigid frame or haptic in combination with soft hinged zones

Patent Assignee: TEKIA (TEKI-N)

Inventor: BLAKE L W

Number of Countries: 093 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200187189	A2	20011122	WO 2001US14964	A	20010509	200219 B
AU 200161313	A	20011126	AU 200161313	A	20010509	200222

Priority Applications (No Type Date): US 2000570301 A 20000512

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
WO 200187189	A2 E	27	A61F-002/16	



Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA  
CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP  
KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT  
RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR  
IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

AU 200161313 A A61F-002/16 Based on patent WO 200187189

Abstract (Basic): WO 200187189 A2

NOVELTY - An intraocular lens ( IOL ) comprises an optic; and a  
haptic having two more rigid frames (110) formed of higher modulus  
material and separated from one another at a discontinuity, and a less  
rigid hinged zone (120) formed of lower modulus material bridging the  
discontinuity.

USE - For use in anterior or posterior chambers of the eye for  
phakic or aphakic lenses and especially in anterior chamber for phakic  
refractive lenses.

ADVANTAGE - The inventive IOL is lightweight, non-irritating,  
easily surgically implanted, aesthetically pleasing, and containing  
plate haptics .

DESCRIPTION OF DRAWING(S) - The figure is a plan view of the  
haptic with an optic.

Rigid frames (110)

Hinged zone (120)

pp; 27 DwgNo 2A/10

Derwent Class: A96; D22; P32

International Patent Class (Main): A61F-002/16

31/7/3 (Item 3 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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014326804 \*\*Image available\*\*

WPI Acc No: 2002-147507/200219

Anterior chamber iris fixated intraocular lens , for correcting visual  
acuity deficiencies, comprises an outer peripheral edge defining an optic  
portion, at least two haptic elements, and a fixation clip or clamp

Patent Assignee: BAUSCH & LOMB INC (BAUL ); BAUSCH & LOMB SURGICAL INC (BAUL )

Inventor: HAGEMEIERS C J; HOFFMANN L; HSING W; STENGER D C; WILDE E T

Number of Countries: 086 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200187182	A2	20011122	WO 2001US14587	A	20010504	200219 B
AU 200159541	A	20011126	AU 200159541	A	20010504	200222

Priority Applications (No Type Date): US 2000570711 A 20000515

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
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WO 200187182	A2	E 39	A61F-002/00	
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Designated States (National): AE AL AM AT AU AZ BA BB BG BR BY CA CH CN  
CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP  
KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE  
SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LU  
MC NL PT SE TR

AU 200159541 A A61F-002/00 Based on patent WO 200187182

Abstract (Basic): WO 200187182 A2

NOVELTY - An anterior chamber iris fixated intraocular lens  
comprises an outer peripheral edge defining an optic portion, at least

two haptic elements permanently connected to the peripheral edge, and a fixation clip or clamp. The clip or clamp is in direct contact or attachment with an aperture in each haptic element. The clamp may be attached through the aperture after implantation of the lens.

DETAILED DESCRIPTION - An anterior chamber iris fixated intraocular lens comprises an outer peripheral edge (30) defining an optic portion (28), at least two haptic elements (32) permanently connected to the outer peripheral edge, and a fixation clip or a fixation clamp (38). The clip or clamp is in direct contact or attachment with an aperture (44) in each haptic element. The fixation clamp may be attached through the aperture after implantation of the lens. It is sized to allow implantation of the lens while assembled through the aperture.

INDEPENDENT CLAIMS are also included for:

(A) the manufacture of the intraocular lens, comprises:

(i) forming a first disc;  
(ii) optionally forming an additional disk(s);  
(iii) machining the lens from the first disc; and  
(iv) optionally machining fixation clamp(s) from the additional disc; and

(B) the use of the intraocular lens in correcting visual acuity deficiencies, comprises creating an incision in a cornea, inserting the lens in an anterior chamber of the eye, and securing the lens within the anterior chamber.

USE - For use in correcting visual acuity deficiencies, e.g. myopia (nearsightedness), hyperopia (farsightedness), presbyopia (age-related farsightedness), aphakia (absence of the crystalline lens of the eye), and astigmatism (irregular conformation of the cornea).

ADVANTAGE - The inventive intraocular lens eliminates anterior chamber angle contact, and minimizes axial displacement of the optic portions along the optical axis of the eyes when compressive forces are exerted against the outer edges. It allows for increased ease of implantation and minimizes damage to tissues in the interior of the eyes. It is resistant to decentration within the eyes and prevents distortion of the visual image.

DESCRIPTION OF DRAWING(S) - The figure shows a plan view of the anterior chamber iris fixated intraocular lens.

Optic portion (28)  
Outer peripheral edge (30)  
Haptic elements (32)  
Fixation clamp (38)  
Aperture (44)

pp; 39 DwgNo 2/15

Derwent Class: A96; D22; P32

International Patent Class (Main): A61F-002/00

31/7/5 (Item 5 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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012398889

WPI Acc No: 1999-204996/199917

**Flexible intraocular lens, optionally with more rigid haptic**

Patent Assignee: MUELLER-LIERHEIM W G K (MUEL-I); MDP MEDICAL DEVICE

POLYMERS GMBH (MDPM-N)

Inventor: MUELLER-LIERHEIM W G K; MUELLER-LIERHEIM W G

Number of Countries: 048 Number of Patents: 008

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 9911303	A1	19990311	WO 98EP5540	A	19980901	199917 B
DE 19738345	C1	19990506	DE 1038345	A	19970902	199922
AU 9897405	A	19990322	AU 9897405	A	19980901	199931
EP 1009450	A1	20000621	EP 98951339	A	19980901	200033
			WO 98EP5540	A	19980901	
BR 9812166	A	20000718	BR 9812166	A	19980901	200042
			WO 98EP5540	A	19980901	
CN 1268064	A	20000927	CN 98808532	A	19980901	200067
JP 2001514052	W	20010911	WO 98EP5540	A	19980901	200167
			JP 2000508404	A	19980901	
EP 1009450	B1	20020403	EP 98951339	A	19980901	200230
			WO 98EP5540	A	19980901	

Priority Applications (No Type Date): DE 1038345 A 19970902

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
WO 9911303	A1 G	16	A61L-027/00	
Designated States (National): AU BA BG BR CA CN CZ EE GE HU ID IL JP KP KR MX NO NZ PL SG SK TR TT UA US UZ VN YU				
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GR IE IT LU MC NL PT SE				
DE 19738345	C1		A61F-002/16	
AU 9897405	A			Based on patent WO 9911303
EP 1009450	A1 G		A61L-027/00	Based on patent WO 9911303
Designated States (Regional): AT CH DE DK ES FI FR GB IT LI NL SE				
BR 9812166	A		A61L-027/00	Based on patent WO 9911303
CN 1268064	A		A61L-027/00	
JP 2001514052	W	20	A61F-002/16	Based on patent WO 9911303
EP 1009450	B1 G		A61L-027/00	Based on patent WO 9911303
Designated States (Regional): AT CH DE DK ES FI FR GB IT LI NL SE				

Abstract (Basic): WO 9911303 A1

NOVELTY - Flexible intraocular lens is made from a copolymer (I) of not less than 80 wt.% hydroxyethyl methacrylate (HEMA) with 4-17 wt.% methyl methacrylate (MMA) or ethyl methacrylate, strongly crosslinked to a 3-dimensional network with ethylene glycol dimethacrylate (EGDMA).

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for an intraocular lens with a flexible optical lens and more rigid haptic part.

USE - The optical lenses are used as intraocular lenses .

ADVANTAGE - The lenses have satisfactory long-term stability towards hydrolysis, especially in the biological medium of the eye, whereas existing lenses of this type, that are not strongly crosslinked, have inadequate stability.

pp; 16 DwgNo 0/0

Derwent Class: A14; A60; A96; D22; P32; P34

International Patent Class (Main): A61F-002/16; A61L-027/00

International Patent Class (Additional): B29D-011/02

31/7/6 (Item 6 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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009256528 \*\*Image available\*\*

WPI Acc No: 1992-383941/199247

Deformable-elastic intra - ocular lens - comprises lens body of

**crosslinked polyacrylic material, crosslinked with di-polyacrylate ester**  
Patent Assignee: AMO PUERTO RICO INC (AMOP-N); IOPTEX RES INC (IOPT-N);  
GUPTA A (GUPT-I)

Inventor: GUPTA A

Number of Countries: 015 Number of Patents: 007

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 514096	A2	19921119	EP 92304180	A	19920508	199247 B
CA 2068446	A	19921114	CA 2068446	A	19920512	199305
AU 9216171	A	19921224	AU 9216171	A	19920512	199309
JP 5146461	A	19930615	JP 92120850	A	19920513	199328
EP 514096	A3	19930331	EP 92304180	A	19920508	199350
AU 661306	B	19950720	AU 9216171	A	19920512	199537
CA 2068446	C	20010807	CA 2068446	A	19920512	200148

Priority Applications (No Type Date): US 91698856 A 19910513

Cited Patents: No-SR.Pub; 2.Jnl.Ref; EP 269288; EP 308130; JP 2218371; JP 63283650; WO 8100570

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 514096	A2	E	13	A61L-027/00	
Designated States (Regional): AT BE CH DE DK ES FR GB IT LI NL SE					
CA 2068446	A			A61L-027/00	
AU 9216171	A			G02B-001/04	
JP 5146461	A		9	A61F-002/16	
EP 514096	A3			A61L-027/00	
AU 661306	B			G02B-001/04	Previous Publ. patent AU 9216171
CA 2068446	C	E		A61L-027/00	

Abstract (Basic): EP 514096 A

A deformable- elastic intraocular lens ( IOL ) body, comprises a deformable- elastic lens body of crosslinked acrylic material comprising copolymers of methacrylate and acrylate esters which are relatively hard and relatively soft at body temp., crosslinked with a diacrylate ester. The crosslinked acrylic material has a tack-free surface, a crosslink density of 0.12-0.3 moles per l, and a Tg of -30 to +25degC.

The IOL body is formed by: a) mixing copolymers of methacrylate and acrylate esters which are relatively hard and relatively soft at body temp; b) partially polymerising the product of (a); c) chemically crosslinking the product of (b) with a diacrylate ester; d) curing the product of (c); and e) forming a lens body having a predetermined optical characteristics from the product of (d).

The IOL formed may also have a flexible haptics attached to the lens body for positioning the lens body in the eye.

USE/ADVANTAGE - Improved IOLs for surgical implantation into the eye are provided they are used for the replacement for a cataractous or injured natural lens. The deformable IOL can be rolled or folded to a relatively low profile size to fit into the eye through a small incision, and then when in the eye returns to the initial nondeformed shape with predetermined optical properties, the lens material has improved balance of superior optical properties, flexibility, elasticity memory and tensile strength.

bl

Dwg.1/7

Derwent Class: A14; A96; D22; P32; P34; P81

International Patent Class (Main): A61F-002/16; A61L-027/00; G02B-001/04

International Patent Class (Additional): B29C-035/02; C08J-005/00

31/7/7 (Item 7 from file: 350)  
 DIALOG(R) File 350:Derwent WPIX  
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 009091024

WPI Acc No: 1992-218446/199227

**Composite intra - ocular lens - comprising soft , foldable central optic region of high reflective index and hard , non-foldable outer region, can be inserted through a small incision**

Patent Assignee: AMERICAN CYANAMID CO (AMCY )

Inventor: VANDERBILT D P

Number of Countries: 018 Number of Patents: 011

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 492126	A2	19920701	EP 91119613	A	19911118	199227 B
AU 9190059	A	19920702	AU 9190059	A	19911224	199234
CA 2058350	A	19920628	CA 2058350	A	19911223	199237
BR 9105630	A	19920901	BR 915630	A	19911227	199240
US 5217491	A	19930608	US 90634919	A	19901227	199324
EP 492126	A3	19930217	EP 91119613	A	19911118	199348
US 5326506	A	19940705	US 90634919	A	19901227	199426
			US 9310373	A	19930128	
AU 649758	B	19940602	AU 9190059	A	19911224	199427
EP 492126	B1	19980114	EP 91119613	A	19911118	199807
DE 69128703	E	19980219	DE 628703	A	19911118	199813
			EP 91119613	A	19911118	
ES 2110973	T3	19980301	EP 91119613	A	19911118	199815

Priority Applications (No Type Date): US 90634919 A 19901227; US 9310373 A 19930128

Cited Patents: No-SR.Pub; EP 333348; EP 99641; US 4615702; US 4702865; US 4718906; US 4787904; US 4997442

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 492126	A2	E	16	A61F-002/16	
Designated States (Regional): AT BE CH DE DK ES FR GB GR IT LI LU NL SE					
US 5217491	A		11	A61F-002/16	
US 5326506	A		12	B29D-011/00	Div ex application US 90634919 Div ex patent US 5217491
AU 649758	B			A61L-027/00	Previous Publ. patent AU 9190059
EP 492126	B1	E	20	A61F-002/16	
Designated States (Regional): AT BE CH DE DK ES FR GB GR IT LI LU NL SE					
DE 69128703	E			A61F-002/16	Based on patent EP 492126
ES 2110973	T3			A61F-002/16	Based on patent EP 492126
AU 9190059	A			A61L-027/00	
CA 2058350	A			A61F-002/16	
BR 9105630	A			G02B-001/04	
EP 492126	A3			A61F-002/16	

Abstract (Basic): EP 492126 A

**A one piece intraocular lens comprises (a) a central, soft foldable optic portion of a high reflective index material capable of being folded by an ophthalmic surgeon during insertion in eye surgery; and (b) a hard , stiff haptic portion of a relatively hard plastic material formed about the central optic portion for supporting the lens within the eye.**

**The hard plastic material is polymerised to the soft material to form a one-piece lens.**

The lens is mfd. by: (i) forming a rod from high refractive index material having the dia. of portion (a); (ii) positioning the rod in a tubular mould and forming around the rod a cylindrical layer of a polymerisable liq. soln. of a material capable of forming the hard portion; (iii) **polymerising the soln. to form one piece having a soft central portion and a stiff outer haptic portion**; and (iv) machining the piece to form the foldable intraocular lens .

USE/ADVANTAGE - The lenses are used as lens implants in eyes, e.g., after cataract removal. The lenses have excellent biocompatibility with the patient's eye and can be inserted through a small incision of ca. 3-4mm. The hard portion provides support for the entire lens structure once inserted and helps to stabilise the position of the

Dwg.0/4

Abstract (Equivalent): EP 492126 B

A one piece intraocular lens comprises (a) a central, soft foldable optic portion of a high reflective index material capable of being folded by an ophthalmic surgeon during insertion in eye surgery; and (b) a hard, stiff haptic portion of a relatively hard plastic material formed about the central optic portion for supporting the lens within the eye.

The hard plastic material is polymerised to the soft material to form a one-piece lens.

The lens is mfd. by: (i) forming a rod from high refractive index material having the dia. of portion (a); (ii) positioning the rod in a tubular mould and forming around the rod a cylindrical layer of a polymerisable liq. soln. of a material capable of forming the hard portion; (iii) polymerising the soln. to form one piece having a soft central portion and a stiff outer haptic portion; and (iv) machining the piece to form the foldable intraocular lens .

USE/ADVANTAGE - The lenses are used as lens implants in eyes, e.g., after cataract removal. The lenses have excellent biocompatibility with the patient's eye and can be inserted through a small incision of ca. 3-4mm. The hard portion provides support for the entire lens structure once inserted and helps to stabilise the position of the

Dwg.0/4

Abstract (Equivalent): US 5217491 A

One-piece biocomposite intraocular lens can be inserted into an eye through an incision which is smaller than the lens dia.

Lens has (a) central safe foldable optic portion of high refractive index material which can be folded by an ophthalmic surgeon during surgery; and (b) hard stiff haptic portion of hard non-hydrogel plastic material formed about the outermost peripheral surface of (a) to support the lens in the eye, joined to periphery via an interpenetrating polymer network to form one-piece prod.

ADVANTAGE - Eye tissues can be protected at point of contact without sacrificing the lens positioning properties of stiff haptics .

Dwg.1/4

US 5326506 A

Making a composite intraocular lens having an optic and heptic portion, comprises forming a core of a high refractive material suitable for use as a lens optic, swelling the core, placing a polymerisable material capable of forming a lens heptic about the core and polymerising the material. The method further comprises machining the formed rod in order to form a lens.

ADVANTAGE - The lens uses two dissimilar polymeric materials with one material soft enough to fold and the second provides a stiffness sufficient to properly hold the lens in place within a patient's eye.

Dwg.1/2

Derwent Class: A14; A96; D22; P32; P34; P81

International Patent Class (Main): A61F-002/16; A61L-027/00; B29D-011/00; G02B-001/04

International Patent Class (Additional): B29D-011/02; C08F-020/06; G02C-007/02

31/7/8 (Item 8 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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007872626

WPI Acc No: 1989-137738/198918

Intra - ocular lens - has diametrically opposite loops defining ellipse symmetrically surrounding lens

Patent Assignee: CILCO INC (CILC-N)

Inventor: JAFFE N S

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 4822358	A	19890418	US 88150460	A	19880201	198918 B

Priority Applications (No Type Date): US 85744137 A 19850612; US 878056 A 19870116; US 88150460 A 19880201

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 4822358	A		5		

Abstract (Basic): US 4822358 A

Two haptics project from an optic on opposite sides, and define an ellipse. Each haptic includes a gussett segment from which a long thin loop projects. Each loop includes another segment with a portion extending from the gusset. This segment also has a portion of greater curvature than the optic periphery from the first portion and through at least one half of an ellipse quadrant. A third segment of smaller radius of curvature forms a major portion of one of the narrower sides of the ellipse. This segment terminates at a free end outward of the optic along a radial line from the portion relative to be beginning of the second segment. In the uncompressed state the haptics do not overlap. The first segment is stiff and the others are flexible .

**Pref. the lens is a single piece of polymethylmethacrylate.**

ADVANTAGE - The lens can be manipulated so that only a small incision for insertion is necessary.

0/2

Derwent Class: A96; D22; P32

International Patent Class (Additional): A61F-002/16

31/7/9 (Item 9 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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007822404

WPI Acc No: 1989-087516/198912

**Deformable-elastic intra-ocular acrylic lens - comprises copolymers of hard and soft methacrylate and acrylate ester(s) crosslinked with diacrylate ester**

Patent Assignee: IOPTEX RES INC (IOPT-N); AMO PUERTO RICO INC (AMOP-N)

Inventor: GUPTA A

Number of Countries: 007 Number of Patents: 009

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 308130	A	19890322	EP 88308282	A	19880908	198912 B
US 4834750	A	19890530	US 8799293	A	19870917	198926
JP 1158949	A	19890622	JP 88233368	A	19880917	198931
EP 308130	B	19920506	EP 88308282	A	19880908	199219
DE 3870779	G	19920611	DE 3870779	A	19880908	199225
			EP 88308282	A	19880908	
CA 1330474	C	19940705	CA 577625	A	19880916	199431
CA 1340128	E	19981117	CA 617090	A	19880916	199905
US 36150	E	19990316	US 8799293	A	19870917	199918
			US 95538757	A	19951003	
JP 2930306	B2	19990803	JP 88233368	A	19880917	199936

Priority Applications (No Type Date): US 8799293 A 19870917; US 95538757 A 19951003

Cited Patents: A3...9001; EP 161764; EP 269288; No-SR.Pub; US 4668446; WO 8100570

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
EP 308130	A	E 13		
Designated States (Regional): DE FR GB IT				
US 4834750	A	10		
EP 308130	B	E 15		
Designated States (Regional): DE FR GB IT				
DE 3870779	G		A61F-002/16	Based on patent EP 308130
CA 1340128	E		A61F-002/16	Reissue of patent CA 1330474
US 36150	E		A61F-002/16	Reissue of patent US 4834750
JP 2930306	B2	10	A61F-002/16	Previous Publ. patent JP 1158949
CA 1330474	C		A61F-002/16	

Abstract (Basic): EP 308130 A

**A deformable- elastic intraocular lens body of crosslinked acrylic material (I) is characterised in that (I) comprises copolymers of methacrylate and acrylate esters which are relatively hard and relatively soft at body temp., crosslinked with a diacrylate ester.**

Pref. (I) has a tack-free surface, a **crosslink** density of 0.005-0.015 moles/l, Tg of -30 to +25 deg.C, a tensile modulus of 1000-3000 psi and an elongation at break of at least 100%.

USE/ADVANTAGE - Used for surgical implantation to replace a cataractous or injures natural lens. The lens can be folded or rolled to a low profile size to fit into the eye through a relatively small incision, then in the eye returns naturally to an initial nondeformed shape with predetermined optical properties. The use of a smaller incision increases safety, reducer the no. of stitches and reduces post-operative rehabilitation time.

Dwg.0/9

Abstract (Equivalent): EP 308130 B

A deformable- elastic intraocular lens body of **cross-linked** acrylic material, characteristed in that said material comprises copolymers of methacrylate and acrylate esters which are respectively relatively hard and relatively soft at body temperature, **crosslinked** with a diacrylate ester..

Abstract (Equivalent): US 4834750 A

A deformable elastic intraocular lens consists of (A) deformable lens body of **crosslinked** acrylic material and (B) flexible haptics attached to the lens body for positioning it in the eye. The body is made of copolymers of (meth)acrylates which are relatively



hard and soft at body temp., **crosslinked** with a diacrylate ester. The **crosslinked** material has a virtually non-tacky surface, a **crosslink** density (0.5-1.5) power -2 mol/ltr., a Tg -30 - 25deg. C., a tensile modulus 70-210 kg/cm2 and an elongation at break at least 100%.

The relatively hard methacrylate ester is pref. a fluoromethacrylate. The lens body consists of 5-25 wt.% F3-Et methacrylate, 25-45 wt.% Et methacrylate and 30-60 wt.% acrylic ester, esp. n-butyl or Et or 2-Et-hexyl acrylate. The diacrylate ester is e.g. ethylene glycol dimethacrylate.

ADVANTAGE - The lens has a better balance of superior optical characteristics, flexibility, elasticity, elastic memory and tensile strength than known ones. (10pp)t

Derwent Class: A14; A96; D22; P32; P34; P81

International Patent Class (Main): A61F-002/16

International Patent Class (Additional): A61L-027/00; B29D-011/00; G02B-001/04

31/7/10 (Item 10 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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007615332

WPI Acc No: 1988-249264/198835

Intra - ocular lens free of haptic loops - has soft skirt fitted around edge of hard bi-convex lens optic

Patent Assignee: GRENDahl D T (GREN-I)

Inventor: GRENDahl D T

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 4764169	A	19880816	US 86938071	A	19861204	198835 B

Priority Applications (No Type Date): US 86938071 A 19861204

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 4764169	A		6		

US 4764169 A

Abstract (Basic): US 4764169 A

Lens comprises a hard biconvex lens optic of high refractive index material, and a channel soft skirt surrounding the edge of the optic and of foldable material. The skirt edge is angled downwardly from the skirt upper surface and its end forms two concentric rings to act as a dual barrier ridge.

The optic. is pref. of PMMA, polysulphone, polycarbonate or other high refractive index material, and is 2-4 mm in dia. The skirt is pref. of silicone, hydrogel or other foldable material, and is 0.05-0.5 mm thick and 6-9 mm in dia.

ADVANTAGE - Combines hard optic with soft skirt foldable for insertion through a small incision in the eye.

0/6

Derwent Class: A96; D22; P32

International Patent Class (Additional): A61F-002/16

31/7/11 (Item 11 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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007358281

WPI Acc No: 1987-355287/198750

Posterior chamber intra-ocular lens for glaucoma and cataract - having two haptics on lens, at least one haptic having blocking segment preventing tissue occluding fistula

Patent Assignee: GIOVINAZZO V J (GIOV-I)

Inventor: GIOVINAZZO V J

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 4710195	A	19871201	US 86853551	A	19860418	198750 B

Priority Applications (No Type Date): US 86853551 A 19860418

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 4710195	A		6		

Abstract (Basic): US 4710195 A

Intraocular lens comprises (a) an optic capable of performing the focussing function of a human lens; (b) a first haptic having a continuous surface and being connected to the optic; (c) a second haptic having a continuous surface and being connected to the optic; and (d) a first blocking segment connected to the first haptic and having a chord length and width of at least 1.5 mm each and defining a circumferential linear segment for contacting eye tissue over its entire length, the first blocking segment being curved and, when in an eye, positioned such that it is posteriorly convex; such that (e) the first blocking segment being sufficiently rigid to retain its shape; (f) the first and second haptics being sufficiently flexible to permit insertion of the lens behind a pupil while being sufficiently rigid to avoid bending or pulling in response to negative pressure; and in which (g) the first and second haptics are both vaulted in an anterior direction away from the optic.

ADVANTAGE - Posterior chamber intraocular lens can be effectively used with glaucoma patients and prevents the posterior capsule and ciliary process from occluding a fistula created in the trabecular meshwork.

0/6

Derwent Class: A96; D22; P32

International Patent Class (Additional): A61F-002/16

33/7/2 (Item 2 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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013851150

WPI Acc No: 2001-335363/200135

Optical implants, used in intraocular lenses, corneal implants, corneal overlays and phakic refractive lenses, comprising optically clear, high refractive index, low-tack homopolymers

Patent Assignee: MEDENNIUM INC (MEDE-N)

Inventor: GULATI V; LIAO X

Number of Countries: 088 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200113972	A1	20010301	WO 2000US23295	A	20000824	200135 B
AU 200070711	A	20010319	AU 200070711	A	20000824	200136
US 6271281	B1	20010807	US 99383837	A	19990826	200147

Priority Applications (No Type Date): US 99383837 A 19990826

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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WO 200113972 A1 E 29 A61L-027/50

Designated States (National): AE AL AM AT AU AZ BA BB BG BR BY CA CH CN  
CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ  
LC LK LR LS LT LU LV MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI  
SK SL TJ TM TR TT UA UG US UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR  
IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TZ UG ZW

AU 200070711 A A61L-027/50 Based on patent WO 200113972

US 6271281 B1 A61F-002/14

Abstract (Basic): WO 200113972 A1

NOVELTY - Optical implants comprise optically clear, high refractive index, low-tack homopolymers having a Tg of less than 15 degreesC and an elongation at break of at least 150%.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are Also included for (1) the optically clear, high refractive index, low-tack homopolymers comprising 95-99.5 wt.% monomer and 0.5-5.0 wt.% stable elasticity inducing **crosslinker** having a rigid chemical group disposed between polymerizable ethylenically unsaturated chemical groups; (2) stable elasticity inducing **crosslinkers**; and (3) **intraocular lenses formed from the homopolymers**.

USE - The implants are intraocular lenses, corneal implants, corneal overlays and phakic refractive lenses (claimed) and also glaucoma shunts and contact lenses. The intraocular lenses can be inserted through a very small incision in the eye.

ADVANTAGE - The implants are stable, elastic, soft, optically clear and have high refractive index and low-tack surfaces. They are foldable, have peripheral borders which taper to sharp edges that resist tearing or breaking, and are resistant to YAG laser damage.

pp; 29 DwgNo 0/0

Derwent Class: A14; A96; D22; P32; P34; P81

International Patent Class (Main): A61F-002/14; A61L-027/50

International Patent Class (Additional): G02C-007/04

33/7/4 (Item 4 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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012814067 \*\*Image available\*\*

WPI Acc No: 1999-620298/199953

Intraocular lens, prevent posterior capsule opacification

Patent Assignee: ALCON LAB INC (ALCO-N)

Inventor: KARAKELLE M; LEBOEUF A R; PATEL A S; SHEETS J W; VAN NOY S J

Number of Countries: 025 Number of Patents: 010

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 9952570	A1	19991021	WO 99US7363	A	19990401	199953 B
AU 9933810	A	19991101	AU 9933810	A	19990401	200013
BR 9908779	A	20001205	BR 998779	A	19990401	200101
			WO 99US7363	A	19990401	
EP 1071482	A1	20010131	EP 99915253	A	19990401	200108
			WO 99US7363	A	19990401	
US 6187042	B1	20010213	US 9881842	A	19980415	200111
			US 99283701	A	19990401	
CN 1291901	A	20010418	CN 99803299	A	19990401	200141
AU 737675	B	20010830	AU 9933810	A	19990401	200155
EP 1071482	B1	20011004	EP 99915253	A	19990401	200158
			WO 99US7363	A	19990401	

DE 69900334 E 20011108 DE 600334 A 19990401 200174  
EP 99915253 A 19990401  
WO 99US7363 A 19990401  
ES 2162518 T3 20011216 EP 99915253 A 19990401 200206  
Priority Applications (No Type Date): US 9881842 P 19980415; US 99283701 A  
19990401

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 9952570	A1	E	20	A61L-027/00	
Designated States (National): AU BR CA CN JP					
Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE					
AU 9933810	A				Based on patent WO 9952570
BR 9908779	A			A61L-027/00	Based on patent WO 9952570
EP 1071482	A1	E		A61L-027/00	Based on patent WO 9952570
Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE					
US 6187042	B1			A61F-002/16	Provisional application US 9881842
CN 1291901	A			A61L-027/00	
AU 737675	B			A61L-027/00	Previous Publ. patent AU 9933810 Based on patent WO 9952570
EP 1071482	B1	E		A61L-027/00	Based on patent WO 9952570
Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE					
DE 69900334	E			A61L-027/00	Based on patent EP 1071482 Based on patent WO 9952570
ES 2162518	T3			A61L-027/00	Based on patent EP 1071482

Abstract (Basic): WO 9952570 A1

NOVELTY - Coating material contains at least two aryl acrylate hydrophobic monomers.

DETAILED DESCRIPTION - Coated intraocular lens consists of substrate material and a coating material containing at least two aryl acrylate hydrophobic monomers of formula (I).

X=H or methyl

m=0-10

Y=optional substituents such as O, S or NR

R=H, CH<sub>3</sub>, isopropoxy, phenyl, benzyl or C<sub>n</sub>H<sub>2n+1</sub>

n=1-10

Ar=aromatic ring optionally substituted by CH<sub>3</sub>, ethyl, propyl, isopropyl, methoxy, cyclohexyl, chlorine, bromine, phenyl or benzyl

An INDEPENDENT CLAIM is also included for application of coating material. The coating composition is polymerised in presence of thermal or photo polymerisation initiator to form a non- **crosslinked** polymer. The polymer is then dissolved in a solvent to form a coating solution. The coating solution is applied on a substrate and secured by activating a dibenzoyl peroxide, substituted dibenzoyl peroxide or dicumyl peroxide **crosslinking** agent.

USE - Used as hard, foldable or soft intraocular lenses.

ADVANTAGE - The coated intraocular lens are biocompatible and reduce the risk of posterior capsule opacification.

pp; 20 DwgNo 0/0

Derwent Class: A14; A96; D22; G02; P32; P34

International Patent Class (Main): A61F-002/16; A61L-027/00

33/7/5 (Item 5 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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011659490

WPI Acc No: 1998-076398/199807

Medical device with biocompatible surface - comprising a surface attached to an acrylamide graft copolymer, attached to a cross - linked polyalkylimine, bonded to a biomolecule

Patent Assignee: MEDTRONIC INC (MEDT )

Inventor: CAHALAN L; CAHALAN P T; HENDRIKS M; VERHOEVEN M

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5702818	A	19971230	US 936218	A	19930119	199807 B
			US 94193964	A	19940209	
			US 95430001	A	19950427	

Priority Applications (No Type Date): US 936218 A 19930119; US 94193964 A 19940209; US 95430001 A 19950427

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5702818	A		5	A61F-002/01	Div ex application US 936218 Div ex application US 94193964 Div ex patent US 5308641 Div ex patent US 5415938

Abstract (Basic): US 5702818 A

Medical device with a biocompatible surface comprises: (a) a solid surface (S); (b) a layer (L1) comprising a graft polymer of acrylamide covalently attached to (S) (with CO<sub>2</sub>H groups pendant to acrylamide moieties) ; (c) another layer (L2) comprising a cross - linked polyalkylimine covalently bonded to (L1) by attachment to the CO<sub>2</sub>H groups; and (d) a biomolecule (I) covalently bonded to (L2).

ADVANTAGE - The device provides a stable platform for the attachment of a range of biomolecules, and has enhanced biocompatibility. The devices are suitably useful as vascular graft tubing, dialysis tubing or membrane, blood oxygenator tubing or membrane, ultrafiltration membrane, intraaortic balloon, blood bag, catheter, suture, soft or hard tissue prosthesis, synthetic prosthesis, artificial organs, and contact and **intraocular lenses** .

Dwg.0/0

Derwent Class: A96; D22; P32

International Patent Class (Main): A61F-002/01

33/7/8 (Item 8 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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007988386

WPI Acc No: 1989-253498/198935

Mfg. soft lens for contact or intra - ocular lens - by trans-esterifying and **crosslinking** hard copolymer of polyacrylate, polymethacrylate and unsatd. carboxylic acid

Patent Assignee: JAPAN SYNTHETIC RUBBER CO LTD (JAPS ); LICKY CONTACT LENS (LICK-N)

Number of Countries: 001 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 1185520	A	19890725	JP 888080	A	19880118	198935 B
JP 2716713	B2	19980218	JP 888080	A	19880118	199812

Priority Applications (No Type Date): JP 888080 A 19880118

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 1185520	A		7		
JP 2716713	B2		6	G02C-007/04	Previous Publ. patent JP 1185520

Abstract (Basic): JP 1185520 A

A method of making non-hydrated soft lens comprises forming a lens base material consisting of a hard copolymer obtd. by polymerising a monomer mixt. contg. (a) 3-70 mole.% of ethylenic unsatd. carboxylic acid and/or 1-5C alkyl ester of acrylic acid, (b) 5-90 mole.% of 6-20C alkyl ester of acrylic acid and/or 6-20C aryl ester of acrylic acid, (c) 3-80 mole % of 1-10C alkyl ester of methacrylic acid and/or 6-20C aryl ester of methacrylic acid and (d) 0.1-10 mole % of **crosslinking** monomer, and contacting the lens base with an alcohol with lower carbon number than the alkyl gp. and/or aryl gp. in component (b) used for the copolymerisation for the esterification, or the esterification and the trans-esterification, of the lens base matter.

Ethylenic unsatd. carboxylic acid in component (a) is e.g. acrylic acid, methacrylic acid or itaconic acid. In (a), the 1-5C alkyl ester of acrylic acid, is e.g. methyl acrylate, ethyl acrylate, propyl acrylate, etc. 6-20C alkyl ester of acrylic acid and 6-20C aryl ester of acrylic acid in component (b) are e.g. hexyl acrylate, octyl acrylate, cyclohexyl acrylate, etc. 1-10C alkyl ester of methacrylic acid and 6-20C aryl ester of methacrylic acid in component (c) are e.g. methyl methacrylate, propyl methacrylate, benzyl methacrylate, phenoxyethyl methacrylate, etc. **Crosslinking** monomer (d) is e.g. dimethacrylic acid ester of ethylene glycol, fiethylene glycol, 1,4-butanediol, etc. 3-10C straight chain alcohol such as n-propyl alcohol, n-butyl alcohol, n-pentyl alcohol, etc.

USE/ADVANTAGE - The method is useful for making non-hydrated soft lens suitable for soft contact lens of intr-ocular lens. The hard copolymer base can be softened by the esterification. The dimensional change resulting from the treatment can be depressed and non-hydrated type soft lens can be obtd. without affecting characteristics such as transparency curvature, etc.

Derwent Class: A14; A96; D21; P34; P81

International Patent Class (Main): G02C-007/04

International Patent Class (Additional): A61L-027/00; C08F-008/14; C08F-220/04; C08F-220/12

36/7/20 (Item 20 from file: 350)

DIALOG(R) File 350: Derwent WPIX

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009693187 \*\*Image available\*\*

WPI Acc No: 1993-386741/199348

Silicone-contg hydrogels for mfr. of contact lenses - contain acrylic-capped polysiloxane, bulky polysiloxanyl-alkyl-(meth)acrylate and hydrophilic monomer  
Patent Assignee: BAUSCH & LOMB INC (BAUL )

Inventor: LAI Y; RUSCIO D; VALINT P L; LAI Y C; RUSCIO D V

Number of Countries: 023 Number of Patents: 012

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 9323774	A1	19931125	WO 93US4455	A	19930512	199348 B
AU 9342444	A	19931213	AU 9342444	A	19930512	199413
US 5358995	A	19941025	US 92883449	A	19920515	199442
US 5387632	A	19950207	US 92883449	A	19920515	199512

			US 94285473	A	19940803	
EP 640221	A1	19950301	EP 93911243	A	19930512	199513
			WO 93US4455	A	19930512	
JP 7508063	W	19950907	WO 93US4455	A	19930512	199544
			JP 94503704	A	19930512	
EP 640221	B1	19970716	EP 93911243	A	19930512	199733
			WO 93US4455	A	19930512	
DE 69312291	E	19970821	DE 612291	A	19930512	199739
			EP 93911243	A	19930512	
			WO 93US4455	A	19930512	
ES 2106344	T3	19971101	EP 93911243	A	19930512	199750
CA 2133964	C	19980203	CA 2133964	A	19930512	199816
BR 9306490	A	19980915	BR 936490	A	19930512	199844
			WO 93US4455	A	19930512	
MX 189546	B	19980805	MX 932796	A	19930513	200037

Priority Applications (No Type Date): US 92883449 A 19920515; US 94285473 A 19940803

Cited Patents: EP 184924; EP 277771; EP 396364; EP 67254; WO 8203397; WO 8503940; WO 8601518; WO 9305098

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 9323774	A1	E	42	G02B-001/04	
Designated States (National): AU BR CA JP KR					
Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE					
AU 9342444	A			G02B-001/04	Based on patent WO 9323774
US 5358995	A		9	C08F-230/08	
US 5387632	A		9	C08F-130/08	Div ex application US 92883449 Div ex patent US 5358995
EP 640221	A1	E		G02B-001/04	Based on patent WO 9323774
Designated States (Regional): DE ES FR GB IE IT					
JP 7508063	W		14	C08F-290/06	Based on patent WO 9323774
EP 640221	B1	E	21	G02B-001/04	Based on patent WO 9323774
Designated States (Regional): DE ES FR GB IE IT					
DE 69312291	E			G02B-001/04	Based on patent EP 640221 Based on patent WO 9323774
ES 2106344	T3			G02B-001/04	Based on patent EP 640221
CA 2133964	C			C08F-290/06	
BR 9306490	A			G02B-001/04	Based on patent WO 9323774
MX 189546	B			C08F-230/008	

Abstract (Basic): WO 9323774 A

**A novel silicone-contg. hydrogel comprises the polymerisation prod. of a) an acrylic capped polysiloxane prepolymer of formula (I); b) a bulky polysiloxanyl-alkyl (meth)acrylate of formula (II); and c) a hydrophilic monomer.** In the formula A and A' are ester or amide of acrylic or methacrylic acid; R1-R19 are 1-10C alkyl, fluoroalkyl, alcohol, ether or fluoroether, or a 6-18C aromatic; m, n and p = an 0-200 with m+n+p = 2-200 a and b are 1-10; X is 0 or NR where R = H or CH3; and c is 1 or 3-10.

Also claimed are: a) a contact lens made from this hydrogel; b) a biomedical device made from this hydrogel; and c) a method of making the hydrogel comprising polymerising the monomer mix and hydrating the resulting prod.

USE/ADVANTAGE - Used for mfr. of soft , biologically inert contact lenses, intra - ocular lenses and heart valves. They are highly wettable, oxygen permeable and rigid .

Dwg.0/0

Abstract (Equivalent): EP 640221 B

A silicone-containing, hydrogel material formed from the polymerisation product of a monomer mix comprising: (a) an acrylic-capped polysiloxane prepolymer represented by the formula (I) wherein: A and A' are independently an ester or amide of an acrylic or a methacrylic acid; R1-R10 are independently an alkyl, fluoroalkyl, alcohol, ether or fluoroether group having 1-10 carbons, or an aromatic group having 6-18 carbons, m, n and p are independently 0 to 200 with  $m + n + p$  being from 2 to 200; and a and b are independently 1 to 10; (b) a bulky polysiloxanylalkyl (meth)acrylate monomer represented by the formula (II) wherein: X is O or N-R; R is H or CH<sub>3</sub>; R11-R19 are independently an alkyl, fluoroalkyl, alcohol, ether or fluoroether group having 1-10 carbons, or an aromatic group having 6-18 carbons; and a is 1 or 3 to 10; and (c) at least one hydrophilic monomer.

Dwg.0/0

Abstract (Equivalent): US 5358995 A

Silicone-contg. hydrogel material is formed from the polymerisation prod. of a monomer mixt. comprising (a) an acrylic-capped polysiloxane prepolymer of formula (I); (b) a bulky polysiloxanylalkyl (meth)acrylate monomer of formula (II); and (c) 1 or more hydrophilic monomer.

A and A' are each an ester or amide of (meth) acrylic acid; R1-19 are each (1-10C) alkyl, fluoroalkyl, alcohol, ether or fluoroether, or (6-18C) aromatic; m, n and p are each 0-200;  $(m+n+p)$  is 23-200; a and b are each 1-10; a' is 1 or 3-10; X is O or NR; and R is H or Me.

USE - As contact lenses or intraocular lenses which are water absorbing, soft, hydrophilic, flexible, hydrostatically-stable and biologically inert.

Dwg.0/0

US 5387632 A

The contact lens is made from a silicone-containing, hydrogel material formed from the polymerisation prod. of a monomer mix comprising: (a) an acrylic-capped polysiloxane prepolymer of formula (I); (b) a bulky polysiloxanylalkyl (meth)acrylate monomer of formula (II); and (c) hydrophilic monomer(s).

A and A' are an ester or amide of a (meth)acrylic acid; R1-10 are 1-10C (fluoro)alkyl, alcohol or (fluoro)ether gp., or 6-18C aromatic gp.; m, n and p are 0-200 with  $m+n+p$  being 23-200; in (I), a and b are 1-10; X is O or N-R; R is H or CH<sub>3</sub>; R11-19 are 1-10C (fluoro)alkyl, alcohol or (fluoro)ether gp., or 6-18C aromatic gp.; and in (II), a is 1, or 3-10.

USE/ADVANTAGE - Contact lenses. High oxygen permeability.

Dwg.0/0

Derwent Class: A26; A96; D22; P34; P81

International Patent Class (Main): C08F-130/08; C08F-230/008; C08F-230/08; C08F-290/06; G02B-001/04

International Patent Class (Additional): A61L-027/00; C08F-283/12; C08L-083/07; G02C-007/04

36/7/21 (Item 21 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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009670782

WPI Acc No: 1993-364334/199346

Polymeric composite lens used as intra - ocular lens or contact lens



- in which optical parts and peripheral parts have different tensile modulus and glass transition temps

Patent Assignee: JAPAN SYNTHETIC RUBBER CO LTD (JAPS )

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 5269191	A	19931019	JP 92100239	A	19920327	199346 B

Priority Applications (No Type Date): JP 92100239 A 19920327

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 5269191	A		12	A61L-027/00	

Abstract (Basic): JP 5269191 A

**A composite lens comprises (A) an optical part having a tensile modulus of 0.01-1000 MPa and a glass transition temp. up to 330 deg.K and (B) peripheral parts having a tensile modulus of 10-500 GPa and a glass transition temp. of at least 270 deg.C and a hardness higher than (A).**

The composite lens is pref. obtd. by (a) polymerising or moulding a lens substrate from a block of composite material of (A) and (B) each having a different reactivity and mating a highly reactive material of (A) or (B) to react to provide a soft or a hard (B) or (b) forming a lens substrate from single block polymer having high reactivity and forming soft (A) or hard (B).

USE/ADVANTAGE - The composite lens is used as an intra - ocular lens or contact lens. It is inserted easily into the eye ball through a small cut without damaging the ocular tissue and has high positional stability in the eye ball.

Dwg.0/3

Derwent Class: A96; D22; P32; P34; P81

International Patent Class (Main): A61L-027/00

International Patent Class (Additional): A61F-002/16; C08F-008/00;

C08J-007/12; G02B-001/04; G02B-003/00

36/7/22 (Item 22 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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009443831 \*\*Image available\*\*

WPI Acc No: 1993-137350/199317

Cpd. lens for e.g. contact lens - prepd. by forming its soft and hard base portions with polymer which is reactive and non-reactive to alcohol respectively

Patent Assignee: JAPAN SYNTHETIC RUBBER CO LTD (JAPS )

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 5072502	A	19930326	JP 91231993	A	19910911	199317 B

Priority Applications (No Type Date): JP 91231993 A 19910911

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 5072502	A		10	G02C-007/14	

Abstract (Basic): JP 5072502 A

**In the prepn. of lens of a soft part (2) and hard part(s) (1), the soft portion of lens base is formed with a hard polymer reactive with alcohols and obtained by polymerisation of monomer(s) of unsaturated carboxylic acid, alkyl acrylate and/or fluoroalkyl acrylate. The hard portion is formed with a hard polymer nonreactive with alcohol and contg. no, or low amt. of, water. By subsequent reaction with alcohol, the former part is rendered a soft**

polymer with no or low water content. Alternatively, the whole lens is formed with the alcohol reactive polymer and reacted with alcohol with a masking over the hard part to be.

ADVANTAGE - For contact lens, artificial-cornea intraocular lens, etc. a cpd. lens of good quality can be prepared by a simple procedure, involving base body formation machining it into a lens and alcohol immersion.

Dwg.1/1

Derwent Class: A14; A96; D22; P32; P34; P81

International Patent Class (Main): G02C-007/14

International Patent Class (Additional): A61F-002/16; A61L-027/00;  
G02B-001/04; G02B-003/00

36/7/32 (Item 32 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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004247589

WPI Acc No: 1985-074467/198512

**Intraocular lens made entirely from hydrogel - esp. hydroxyethyl methacrylate with integral mounting flanges**

Patent Assignee: EZEKIEL NOMINEES PTY LTD (EZEK-N)

Inventor: BARRETT G D

Number of Countries: 022 Number of Patents: 020

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 8500965	A	19850314	WO 84AU196	A	19840828	198512	B
EP 136807	A	19850410	EP 84305762	A	19840823	198515	
PT 79154	A	19850322				198516	
AU 8431730	A	19850307				198517	
JP 60077765	A	19850502	JP 84181643	A	19840830	198524	
BR 8407042	A	19850730				198537	
NO 8501735	A	19850729				198537	
DK 8501911	A	19850626				198606	
ZA 8406570	A	19860423	ZA 846570	A	19840823	198631	
US 4664666	A	19870512	US 84640098	A	19840813	198721	
CA 1237851	A	19880614				198828	
KR 8900205	B	19890310				198937	
US 4936850	A	19900626	US 89330991	A	19890329	199028	
EP 391452	A	19901010	EP 90109462	A	19840823	199041	
EP 136807	B	19901212				199050	
DE 3483738	G	19910124				199105	
IL 72779	A	19920906	IL 72779	A	19840827	199242	
EP 391452	B1	19940105	EP 84305762	A	19840823	199402	
			EP 90109462	A	19840823		
DE 3486263	G	19940217	DE 3486263	A	19840823	199408	
			EP 90109462	A	19840823		
DK 172520	B	19981109	WO 84AU196	A	19840828	199851	
			DK 851911	A	19850429		

Priority Applications (No Type Date): AU 831120 A 19830830

Cited Patents: 1.Jnl.Ref; A3...8527; No-SR.Pub; US 3961379; US 4242762; US 4249272; US 4254509; US 4257521; US 4449257; NoSR.Pub; AU 23520; AU 86254; AU 86703; GB 2114315

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 8500965	A	E	29		

Designated States (National): BR DK KR NO

EP 136807        A    E  
Designated States (Regional): AT BE CH DE FR GB IT LI LU NL SE  
US 4936850       A       12  
EP 391452        A  
Designated States (Regional): AT BE CH DE FR GB IT LI LU NL SE  
EP 136807        B  
Designated States (Regional): AT BE CH DE FR GB IT LI LU NL SE  
EP 391452        B1 E 13 A61F-002/16    Related to application EP 84305762  
Designated States (Regional): AT BE CH DE FR GB IT LI LU NL SE  
DE 3486263       G        A61F-002/16    Based on patent EP 391452  
DK 172520        B        A61F-002/16    Previous Publ. patent DK 8501911  
IL 72779         A        A61F-002/16  
Abstract (Basic): WO 8500965 A

**The intraocular lens implant is made from a hydrogel esp. hydroxyethyl methacrylate and comprises a lens portion with resilient mounting flanges.** Pref. there are two flanges which taper outwards from the lens. The lens dia. is 4-7 mm and pref. the overall length including the flanges is 8-15 mm.

The lens (18) is supported by flanges (14) in the eye. The flanges may have a curvature from plano to 10mm radius. The optical power is pref. determined by the anterior face which may have a curvature of 13 to 30 mm.

USE/ADVANTAGE - The lens is implanted in the posterior chamber of the eye. The hydrogel reduces damage to the corneal endothelium.

4/13

Abstract (Equivalent): EP 136807 B

A self-supporting intraocular lens (10) that is a posterior chamber lens suitable for implantation in the posterior chamber (30) of the human eye to replace the natural crystalline lens, and comprising: an optical portion (12) having an anterior surface and a posterior surface (16), said optical portion (12) being sufficiently thick and rigid to provide stable optical correction; and resilient flange means (14) having an anterior surface and a posterior surface, said flange means (14) extending laterally from opposite sides of the optical portion (12) and projecting anteriorly in the posterior chamber (30) of the eye to support and retain the lens (10) in place in the eye following implantation without fixation to the iris (26) of the eye; characterised in that said lens (10) is formed entirely of hydrogel and maintains its shape when in hydrated form, said flange means (14) is imperforate, and the posterior surface of the flange means (14) and the posterior surface of the optical portion (12) define a single continuous arc. (15pp)

Abstract (Equivalent): US 4936850 A

A self-supporting, soft intraocular lens for transplantation in the posterior chamber of human eye for replacement of the natural crystalline lens comprises an optical portion with anterior and posterior surfaces, thick and rigid enough to provide stable correction. A pair of lateral flanges project from opposite sides of the optical portion, each having an anterior and posterior surfaces and projecting anteriorly into the posterior chamber of the eye to dispose it away from the iris. The flanges function to retain the lens in place without fixation to the iris and have sufficient strength and flexibility to allow slight movement along the visual axis of the eye when forces are applied to the axis to prevent displacement from alignment. The lens is a hydrogel and maintains shape when hydrated or dehydrated.

ADVANTAGE - Minimal endothelial damage is caused. (12pp)r  
US 4664666 A

A self-supporting intraocular lens suitable for implantation in the human eye to replace the natural crystalline lens, comprises an optical portion with flanges extending laterally and projecting anteriorly of the optical portion. Both the optical portion and the flanges have an anterior and a posterior surface. The flanges are solid and support and retain the lens in place in the eye following implantation without fixation to the iris in the eye.

The lens is formed entirely of a hydrogel. The posterior surfaces of the flanges and the posterior surface of the optical portion define a single continuous arc. (8pp

Derwent Class: A96; D22; P32; P34; P81

International Patent Class (Main): A61F-002/16

International Patent Class (Additional): A61F-001/16; A61F-002/14;

A61L-027/00; B29D-011/00; G02B-001/04

36/7/35 (Item 35 from file: 347)

DIALOG(R) File 347:JAPIO

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07011272 \*\*Image available\*\*

INTRAOCULAR LENS AND ITS MANUFACTURING METHOD

PUB. NO.: 2001-238899 [JP 2001238899 A]

PUBLISHED: September 04, 2001 (20010904)

INVENTOR(s): SUZUKI KAZUTAKA

APPLICANT(s): MENICON CO LTD

APPL. NO.: 2000-050773 [JP 200050773]

FILED: February 28, 2000 (20000228)

ABSTRACT

PROBLEM TO BE SOLVED: To provide a method of manufacturing an intraocular lens which comprises an artificial lens implant made of a soft material and loops for holding lens implant in place which is made of a hard material, and to provide a method of fixing the loops for holding lens implant in place to the artificial lens implant firmly and the procedure that can be done easily without causing any damages to the artificial lens implant or the loops for holding lens implant in place.

SOLUTION: After holes 22 for attachment with a smaller diameter than that of loops 14 for holding lens implant in place are made on the peripheral part 16 of the artificial lens implant 12, parts 18 to be attached found at the loops 14 for holding lens are forced to go through the holes 22 for attachment and placed. The loops 14 for holding lens inserted into the holes 22 for attachment are heated locally and fused without fusing the artificial lens implant 12, and the parts of loops 14 for holding lens, which are heated and fused, are moved inside the holes 22 for attachment. As a result, expanded parts with a larger, outer diameter than that of the loops 14 for holding lens are formed at places where the loops 14 for holding lens are located inside the holes 22 for attachment, the loops 14 for holding lens are caught on the artificial lens implant 12 mechanically.

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36/7/38 (Item 38 from file: 347)

DIALOG(R) File 347:JAPIO

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05661503 \*\*Image available\*\*

INTRAOCULAR LENS AND MANUFACTURING METHOD THEREOF

PUB. NO.: 09-276303 [JP 9276303 A]

PUBLISHED: October 28, 1997 (19971028)  
INVENTOR(s): MITOMO KIKUO  
APPLICANT(s): HOYA CORP [330074] (A Japanese Company or Corporation), JP  
(Japan)  
APPL. NO.: 08-096404 [JP 9696404]  
FILED: April 18, 1996 (19960418)

ABSTRACT

PROBLEM TO BE SOLVED: To provide an easily manufacturable intraocular lens with a soft optical part.  
SOLUTION: This intraocular lens is composed of an optical part 1 made of soft material and two support parts 2 and 3 to support the optical part 1. The optical part 1 is made of a soft material and its central part has the function of a lens. Each of the support parts 2 and 3 comprises respective loops 2a and 3a and respective connection parts 2b and 3b. The loops 2a and 3a have long shapes and are to fix the intraocular lens on a prescribed intracapsular position. Connection parts 2b and 3b are equipped on each one end of loops 2a and 3a. Relatively hard materials such as PMMA or PP are used as the material for the support parts. The connection parts 2b and 3b of the support parts 2 and 3 are embedded in an area around the optical part 1 and almost whole parts of connection parts 2b and 3b are covered by the optical part 1.

36/7/39 (Item 39 from file: 347)  
DIALOG(R) File 347:JAPIO  
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05020938 \*\*Image available\*\*  
DISK-SHAPED INTRAOCULAR LENS AND ITS MANUFACTURE THEREOF  
PUB. NO.: 07-313538 [JP 7313538 A]  
PUBLISHED: December 05, 1995 (19951205)  
INVENTOR(s): OZAWA TADAHICO  
OSAKABE YASUHIRO  
SHIBUYA AKIHIKO  
APPLICANT(s): HOYA CORP [330074] (A Japanese Company or Corporation), JP  
(Japan)  
APPL. NO.: 06-106941 [JP 94106941]  
FILED: May 20, 1994 (19940520)

ABSTRACT

PURPOSE: To provide a disk-shaped intraocular lens having an optical part composed of PMMA having an excellent lens characteristic and a support part formed of a material excellent in a joining property with the PMMA.  
CONSTITUTION: This disk-shaped intraocular lens has an optical part 5 composed of a hard polymer mainly composed of methyl methacrylate and a support part 10 which supports this optical part 5 by joining thereto and is composed of an acrylic soft polymer.

File 350:Derwent WPIX 1963-2001/UD,UM &UP=200230  
File 344:CHINESE PATENTS ABS APR 1985-2002/APR  
File 347:JAPIO Oct/1976-2001/Dec(Updated 020503)  
File 371:French Patents 1961-2002/BOPI 200209  
S1 277 IOL OR IOLS  
S2 1913 (INTRA()OCULAR OR INTRAOCULAR)()LENS??  
S3 589 HAPTIC??  
S4 388965 FLEXIBLE  
S5 360450 ELASTIC???  
S6 2328 MALLEABLE  
S7 8576 PLIABLE

S8 373972 SOFT OR BEND????  
S9 162770 RIGID  
S10 15366 STIFF  
S11 182157 HARD  
S12 24497 FIRM  
S13 0 IMMALLEABLE OR IMPLIABLE  
S14 870 INFLEXIBLE OR UNFLEXIBLE  
S15 1748 INELASTIC  
S16 335 UNBEND????  
S17 120737 CROSS()LINK???? OR **CROSSLINK????**  
S18 49927 MODIFY???  
S19 434820 MODIFI??????  
S20 1151312 CHANG???  
S21 396637 ALTER??????  
S22 215619 VARY???  
S23 950343 VARI????  
S24 1324610 STRUCTUR???  
S25 2113 S1:S2  
S26 1054197 S4:S8  
S27 379987 S9:S16  
S28 15974 S18:S21(3N)S24  
S29 60 S25 AND S26(S)S27  
S30 11 S3 AND S29  
**S31 11 IDPAT (sorted in duplicate/non-duplicate order)**  
S32 13 S29 AND (S17 OR S28)  
**S33 9 S32 NOT S30**  
S34 40 S29 NOT (S30 OR S32)  
S35 40 IDPAT (sorted in duplicate/non-duplicate order)  
**S36 39 IDPAT (primary/non-duplicate records only)**  
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33/3,AB/5 (Item 5 from file: 348)

DIALOG(R)File 348:EUROPEAN PATENTS

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00630207

POLYMERIC COMPOSITIONS AND INTRAOCULAR LENSES MADE FROM SAME  
POLYMERISCHE ZUSAMMENSETZUNGEN UND DARAUS HERGESTELLTE INTRA-OKULARLINSEN  
COMPOSITIONS POLYMERES ET LENTILLES INTRAOCULAIRES CONSTITUEES DESDITES  
COMPOSITIONS

PATENT ASSIGNEE:

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92623-9534, (US), (Proprietor designated states: all)

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CHRIST, F. Richard,, 650 Lombardy Lane, Laguna Beach, CA 92651, (US)

LEGAL REPRESENTATIVE:

Hutchins, Michael Richard et al (59153), FRY HEATH & SPENCE The Old  
College 53 High Street, Horley Surrey RH6 7BN, (GB)

PATENT (CC, No, Kind, Date): EP 667966 A1 950823 (Basic)

EP 667966 B1 020213

WO 9411764 940526

APPLICATION (CC, No, Date): EP 94900553 931105; WO 93US10657 931105

PRIORITY (CC, No, Date): US 973470 921109

DESIGNATED STATES: AT; BE; CH; DE; DK; ES; FR; GB; GR; IE; IT; LI; LU; MC;  
NL; PT; SE

INTERNATIONAL PATENT CLASS: G02B-001/04; A61F-002/16

NOTE: No A-document published by EPO

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	200207	912
CLAIMS B	(German)	200207	899
CLAIMS B	(French)	200207	1023
SPEC B	(English)	200207	4166
Total word count - document A			0
Total word count - document B			7000
Total word count - documents A + B			7000

33/3,AB/6 (Item 6 from file: 348)

DIALOG(R)File 348:EUROPEAN PATENTS

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00621942

Biomolecule-conjugable solid surfaces

Biomolekul-Konjugat bildende feste Oberflächen

Surface solide pouvant former un conjugué avec une biomolécule

PATENT ASSIGNEE:

MEDTRONIC, INC., (209272), 7000 Central Avenue N.E., Minneapolis,  
Minnesota 55432-3576, (US), (applicant designated states:  
DE;FR;GB;IT;NL;SE)

INVENTOR:

Verhoeven, Michel, Parallelweg 3g, NL-6221 BD Maastricht, (NL)

Cahalan, Patrick, Schepersgrats 6, NL-6171 VM Stein, (NL)

Cahalan, Linda, Schepersgrats 6, NL-6171 VM Stein, (NL)

Hendriks, Marc, Clercstraat 15, NL-6441 CS Brunssum, (NL)

LEGAL REPRESENTATIVE:

Cockbain, Julian, Dr. (52641), Frank B. Dehn & Co., European Patent  
Attorneys, 179 Queen Victoria Street, London EC4V 4EL, (GB)

PATENT (CC, No, Kind, Date): EP 608094 A1 940727 (Basic)

EP 608094 B1 990616

APPLICATION (CC, No, Date): EP 94300310 940117;

PRIORITY (CC, No, Date): US 6218 930119

DESIGNATED STATES: DE; FR; GB; IT; NL; SE

INTERNATIONAL PATENT CLASS: A61L-033/00;

ABSTRACT EP 608094 A1

An improved spacer arrangement for improving the biocompatibility of a biomaterial and a method for making it in which a polyalkylimine is covalently attached to the aminated surface of a solid substrate and combined with a **crosslinking** agent which is at least difunctional in aldehyde groups. The polyalkylimine can be, for example, polyethyleneimine and the **crosslinking** agent can be, for example, glutaraldehyde.

ABSTRACT WORD COUNT: 64

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	9924	597
CLAIMS B	(German)	9924	562
CLAIMS B	(French)	9924	718
SPEC B	(English)	9924	3894
Total word count - document A			0
Total word count - document B			5771

Total word count - documents A + B 5771

33/3,AB/10 (Item 10 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
(c) 2002 WIPO/Univentio. All rts. reserv.  
00780843  
HOMOPOLYMERS CONTAINING **CROSSLINKERS** AND OCULAR IMPLANTS MADE THEREFROM  
HOMOPOLYMERES CONTENANT DES AGENTS DE RETICULATION ET IMPLANTS OCULAIRES  
PRODUITS A PARTIR DE CEUX-CI  
Patent Applicant/Assignee:  
MEDENNIUM INC, 15350 Barranca Parkway, Irvine, CA 92618, US, US  
(Residence), US (Nationality), (For all designated states except: US)  
Patent Applicant/Inventor:  
LIAO Xiuago, 24 Del Ventura, Irvine, CA 92606, US, US (Residence), CN  
(Nationality), (Designated only for: US)  
GULATI Vijay, 24405 Peacock Street, Lake Forest, CA 92630, US, US  
(Residence), US (Nationality), (Designated only for: US)  
Legal Representative:  
CULLMAN Louis C (agent), Oppenheimer Wolff & Donnelly LLP, Suite 3800,  
2029 Century Park East, Los Angeles, CA 90067-3024, US,  
Patent and Priority Information (Country, Number, Date):  
Patent: WO 200113972 A1 20010301 (WO 0113972)  
Application: WO 2000US23295 20000824 (PCT/WO US0023295)  
Priority Application: US 99383837 19990826  
Designated States: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE  
ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT  
LU LV MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR  
TT UA UG US UZ VN YU ZA ZW  
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE  
(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG  
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW  
(EA) AM AZ BY KG KZ MD RU TJ TM  
Publication Language: English  
Filing Language: English  
Fulltext Word Count: 10385  
English Abstract  
Ocular implants composed of homopolymers containing stable elasticity  
inducing **crosslinkers** which contain rigid chemical groups disposed  
between at least two polymerizable ethyleneically unsaturated chemical  
groups are disclosed. These ocular implants are stable, elastic, soft,  
optically clear, have high refractive index and low-tack surfaces.

33/3,AB/13 (Item 13 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
(c) 2002 WIPO/Univentio. All rts. reserv.  
00747005  
INTRAOCULAR LENSES MADE FROM POLYMERIC COMPOSITIONS AND MONOMERS USEFUL IN  
SAID COMPOSITIONS  
LENTILLE INTRAOCULAIRE REALISEE A PARTIR DE COMPOSITIONS POLYMERES ET  
MONOMERES UTILES POUR CES COMPOSITIONS  
Patent Applicant/Assignee:  
, ALLERGAN SALES INC, 2525 Dupont Drive, Irvine, CA 92612, US, US  
(Residence), US (Nationality)  
Inventor(s):  
MAKKER Harish C, 27371 Osuna, Mission Viejo, CA 92691, US  
LIAO Xiugao, 24 Del Ventura, Irvine, CA 92606, US



WEINSCHENK Joseph I III, 37 Dover Place, Laguna Niguel, CA 92677, US  
Legal Representative:  
DONOVAN Stephen, Allergan Sales, Inc., 2525 Dupont Drive, Irvine, CA  
92612, US  
Patent and Priority Information (Country, Number, Date):  
Patent: WO 200060383 A1 20001012 (WO 0060383)  
Application: WO 2000US8892 20000404 (PCT/WO US0008892)  
Priority Application: US 99286356 19990405  
Designated States: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE  
ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT  
LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT  
UA UG UZ VN YU ZA ZW  
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE  
(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG  
(AP) GH GM KE LS MW SD SL SZ TZ UG ZW  
(EA) AM AZ BY KG KZ MD RU TJ TM  
Publication Language: English  
Filing Language: English  
Fulltext Word Count: 6872  
English Abstract

Ophthalmic lenses, such as intraocular lenses, include **crosslinked** polymeric materials having a first constituent derived from a first monomeric component selected from the group consisting of 2-phenylpropyl acrylate or methacrylate and mixtures thereof, and a second constituent derived from a second component in an amount effective as a **crosslinker** in the **crosslinked** polymeric material. The **crosslinked** polymeric material has branched chain alkyl groups, in an amount effective to reduce the tackiness of the **crosslinked** polymeric material relative to a substantially identical **crosslinked** polymeric material without branched chain alkyl groups.

33/3,AB/15 (Item 15 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
(c) 2002 WIPO/Univentio. All rts. reserv.  
00572607

**CROSSLINKED POLYMERS AND REFRACTIVE DEVICES FORMED THEREFROM**  
**POLYMERES RETICULES ET DISPOSITIFS DE REFRACTION**

Patent Applicant/Assignee:  
BIOCOMPATIBLES LIMITED,  
MUIR Andrew Victor Graham,  
ROWAN Lee,  
JONES Stephen Alister,  
STEDMAN John Charles,

Inventor(s):  
MUIR Andrew Victor Graham,  
ROWAN Lee,  
JONES Stephen Alister,  
STEDMAN John Charles,

Patent and Priority Information (Country, Number, Date):  
Patent: WO 200035980 A1 20000622 (WO 0035980)  
Application: WO 99GB4206 19991213 (PCT/WO GB9904206)  
Priority Application: EP 98310163 19981211  
Designated States: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK  
DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR  
LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ  
TM TR TT TZ UA UG US UZ VN YU ZA ZW GH GM KE LS MW SD SL SZ TZ UG ZW AM

AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL  
PT SE BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG

Publication Language: English

Fulltext Word Count: 10537

English Abstract

A polymer is formed of ethylenically unsaturated monomers including a zwitterionic monomer, an aromatic monomer and a **cross-linking** monomer. Preferably the **crosslinking** monomer includes at least one aromatic group containing compound and at least one aliphatic group containing compound. The polymer is water-swellaable and a hydrogel has optical and mechanical properties rendering it suitable for use as an intraocular refractive device such as an intraocular lens.

33/3,AB/16 (Item 16 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT

(c) 2002 WIPO/Univentio. All rts. reserv.

00563325

INTRAOCULAR LENSES MADE FROM POLYMERIC COMPOSITIONS

CRISTALLINS ARTIFICIELS FABRIQUES A PARTIR DE COMPOSITIONS POLYMERES

Patent Applicant/Assignee:

ALLERGAN SALES INC,

Inventor(s):

MAKKER Harish C,

LIAO Xiugao,

WEINSCHENK Joseph I III,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200026698 A1 20000511 (WO 0026698)

Application: WO 99US24982 19991025 (PCT/WO US9924982)

Priority Application: US 98106381 19981029; US 99265720 19990309; US  
99286356 19990405

Designated States: JP AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

Publication Language: English

Fulltext Word Count: 6237

English Abstract

Ophthalmic lenses, such as intraocular lenses, include **cross-linked** polymeric materials having a first constituent derived from a first monomeric component selected from the group consisting of acrylates, methacrylates and mixtures thereof, and a second constituent derived from a second component in an amount effective as a cross linker in the **cross-linked** polymeric material. The **cross-linked** polymeric material has branched chain alkyl groups, preferably included with at least a portion of the first monomeric component, in an amount effective to reduce the tackiness of the **cross-linked** polymeric material relative to a substantially identical **cross-linked** polymeric material without the branched chain alkyl groups.

33/3,AB/18 (Item 18 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT

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00515833

METHODS AND MATERIALS FOR PRODUCING INTRACULAR LENSES

PROCEDE DE PRODUCTION DE LENTILLES INTRA-OCULAIRES ET LEUR MATERIAU  
CONSTITUTIF

Patent Applicant/Assignee:

PHARMACIA & UPJOHN GRONINGEN B V,

HODD Kenneth A,

DILLINGHAM Keith Alfred,  
DE GROOT Jacqueline,  
Inventor(s):  
HODD Kenneth A,  
DILLINGHAM Keith Alfred,  
DE GROOT Jacqueline,  
Patent and Priority Information (Country, Number, Date):  
Patent: WO 9947185 A2 19990923  
Application: WO 99EP1766 19990316 (PCT/WO EP9901766)  
Priority Application: SE 98853 19980316  
Designated States: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES  
FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU  
LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA  
UG US UZ VN YU ZW GH GM KE LS MW SD SL SZ UG ZW AM AZ BY KG KZ MD RU TJ  
TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI  
CM GA GN GW ML MR NE SN TD TG  
Publication Language: English  
Fulltext Word Count: 8709  
English Abstract

A method of producing an intraocular lens, comprising the steps of  
injecting a high-refractive index, low viscosity composition of  
**cross-linkable** units into an enclosure, initiating a polymerization  
reaction optionally under forming pressure to create a synthetic polymer  
lens. The method is especially suitable for producing an intraocular lens  
directly in the capsular bag of the eye from an injected aqueous solution  
of macromolecular particles which can undergo a **cross-linking** reaction to  
a solid lens when exposed to light.

33/3,AB/19 (Item 19 from file: 349)  
DIALOG(R) File 349:PCT FULLTEXT  
(c) 2002 WIPO/Univentio. All rts. reserv.  
00427947  
PRODUCTION METHODS FOR IOLS  
TECHNIQUES DE PRODUCTION DE LENTILLE INTRAOCULAIRE (LIO)  
Patent Applicant/Assignee:  
ALLERGAN 2525 Dupont Drive T-,  
Inventor(s):  
PHAN Quoc T,  
PAUL Marlene L,  
Patent and Priority Information (Country, Number, Date):  
Patent: WO 9818410 A1 19980507  
Application: WO 97US19394 19971029 (PCT/WO US9719394)  
Priority Application: US 96741070 19961030  
Designated States: JP AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE  
Publication Language: English  
Fulltext Word Count: 7497  
English Abstract

New methods for producing intraocular lenses (IOLs) include a  
combination of steps which provide outstanding pull strength between the  
fixation member of the IOL and the optic of the IOL without requiring the  
lens body region of the fixation member to have enlarged anchor  
structures. In one embodiment, the present methods include providing an  
optic member having a recess; providing a fixation member having a lens  
bonding region free of enlarged anchor structures; placing the lens  
bonding region into the recess; and thereafter doing at least one of  
reducing the size of the recess and increasing the cross-sectional area

of the lens bonding region. The lens bonding region of the fixation member is thereby secured to the optic member.

33/3,AB/20 (Item 20 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
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00416594

**PROCESS FOR PREPARING AN OCULAR DEVICE**

PROCEDE DE PREPARATION D'UN DISPOSITIF OCULAIRE

Patent Applicant/Assignee:

HYDRON LIMITED,  
HOLDSTOCK Barry,  
GLASBEY Trevor Owen,  
SIDHU Jotinderpal Singh,

Inventor(s):

HOLDSTOCK Barry,  
GLASBEY Trevor Owen,  
SIDHU Jotinderpal Singh,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9807055 A1 19980219  
Application: WO 97GB2130 19970808 (PCT/WO GB9702130)  
Priority Application: GB 9616959 19960813

Designated States: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES  
FI GB GE GH HU IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MN  
MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU  
ZW GH KE LS MW SD SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH DE DK ES  
FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN ML MR NE SN TD TG

Publication Language: English

Fulltext Word Count: 5481

English Abstract

A process of preparing an ocular device (such as a contact lens) consisting essentially of GMA and HEMA is described. The process comprising the following steps: a) copolymerising a second monomer and a first monomer having attached to it a modifier group, thereby to form a first polymer having associated with it the modifier group; and b) modifying all or some the modifier group associated with the first polymer to form a second polymer different from the first polymer thereby to form the ocular device consisting essentially of GMA and HEMA.

33/3,AB/23 (Item 23 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
(c) 2002 WIPO/Univentio. All rts. reserv.  
00259521

HIGH REFRACTIVE INDEX HYDROGELS AND USES THEREOF  
HYDROGELS D'INDICE DE REFRACTION ELEVE ET LEURS UTILISATIONS

Patent Applicant/Assignee:

KABI PHARMACIA OPHTHALMICS INC,

Inventor(s):

WANG Yading,  
ZHOU Stephen Q,  
RICHARDS Thomas P,  
LIAO Xiugao,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9407686 A1 19940414  
Application: WO 93US9121 19930924 (PCT/WO US9309121)  
Priority Application: US 92951775 19920928; US 9396932 19930723

Designated States: AU BB BG BR BY CA CZ FI HU JP KP KR KZ LK LV MG MN MW NO  
NZ PL RO RU SD SK UA VN AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE  
BF BJ CF CG CI CM GA GN ML MR NE SN TD TG

Publication Language: English

Fulltext Word Count: 9220

English Abstract

Optically transparent, high refractive index hydrogels are provided.  
Expansile hydrogel intraocular lenses (10) are fabricated from the hydrogels by heating them above their elastic deformation temperatures and deforming them into an elongated configuration having at least one reduced dimension (20) suitable for insertion through a small surgical incision. The lenses are allowed to cool in this configuration and retain the deformed shape prior to surgical implantation. Following implantation the lenses hydrate into an enlarged elastic form reassuming the original lens configuration of full capsule size.

File 348:EUROPEAN PATENTS 1978-2002/May W01

File 349:PCT FULLTEXT 1983-2002/UB=20020509,UT=20020502

S1	3730	IOL OR IOLS
S2	1689	(INTRA()OCULAR OR INTRAOCULAR) () LENS??
S3	752	HAPTIC??
S4	185192	FLEXIBLE
S5	101248	ELASTIC???
S6	3391	MALLEABLE
S7	9804	PLIABLE
S8	179425	SOFT OR BEND????
S9	105847	RIGID
S10	22318	STIFF
S11	133325	HARD
S12	19226	FIRM
S13	1	IMMALLEABLE OR IMPLIABLE
S14	4712	INFLEXIBLE OR UNFLEXIBLE
S15	2800	INELASTIC
S16	281	UNBEND????
S17	86702	CROSS()LINK???? OR <b>CROSSLINK????</b>
S18	114058	MODIFY???
S19	598842	MODIFI???????
S20	980991	CHANG???
S21	570537	ALTER???????
S22	334346	VARY???
S23	886964	VARI???
S24	595794	STRUCTUR???
S25	5026	S1:S2
S26	368521	S4:S8
S27	248206	S9:S16
S28	48790	S18:S21(3N)S24
S29	265	S25(S)S26(S)S27
S30	127469	S17 OR S28
S31	25	S29(S)S30
S32	25	IDPAT (sorted in duplicate/non-duplicate order)
S33	24	IDPAT ( <b>primary/non-duplicate records only</b> )

\*\*\*\*\*

1/3,AB/1 (Item 1 from file: 349)  
DIALOG(R) File 349:PCT FULLTEXT

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00317741

WATER MISCIBLE NON-HYDROLYZABLE CROSS-LINKERS AND HIGH REFRACTIVE INDEX  
HYDROGELS PREPARED THEREWITH

AGENTS DE RETICULATION NON HYDROLYSABLES MISCIBLES DANS L'EAU ET HYDROGELS  
A INDICE DE REFRACTION ELEVE PREPARES AVEC CEUX-CI

Patent Applicant/Assignee:

KABI PHARMACIA OPHTHALMICS INC,

Inventor(s):

LIAO Xiugao,

WANG Yading,

ZHOU Stephen Q,

RICHARDS Thomas P,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9600248 A1 19960104

Application: WO 95US8122 19950627 (PCT/WO US9508122)

Priority Application: US 94951 19940627

Designated States: AM AU BB BG BR BY CA CN CZ EE FI GE HU IS JP KE KG KP KR

KZ LK LR LT LV MD MG MN MW MX NO NZ PL RO RU SD SG SI SK TJ TM TT UA UG

UZ VN KE MW SD SZ UG AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE BF

BJ CF CG CI CM GA GN ML MR NE SN TD TG

Publication Language: English

Fulltext Word Count: 5148

English Abstract

Non-hydrolyzable, hydrophilic, heterocyclic cross-linking agents for cross-linking vinyl comonomers are provided. The cross-linked copolymers form optically transparent, high water content, and high refractive index hydrogels having long-term stability which are useful as intraocular lenses and superabsorbents. The cross-linkers are selected from 4,6-divinylpyrimidine, 2, 5-divinylpyrazine, 1,4-divinylimidazole and 1,5-divinylimidazole.

1/3,AB/2 (Item 1 from file: 654)

DIALOG(R)File 654:US PAT.FULL.

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3637412

Derwent Accession: 1995-283133

Utility

C/ Water miscible non-hydrolyzable cross-linkers and high refractive index hydrogels prepared therewith; INTRAOCULAR LENSES

Inventor: Liao, Xiugao, Alhambra, CA

Wang, Yading, Pasadena, CA

Zhou, Stephen O., Hacienda Heights, CA

Richards, Thomas P., Shelton, WA

Assignee: Kabi Pharmacia Ophthalmics, Inc. (02), Monrovia, CA

Kabi Pharmacia Ophthalmics Inc (Code: 33607)

Examiner: Buttner, David (Art Unit: 152)

Law Firm: Poms, Smith, Lande & Rose

	Publication Number	Kind	Date	Application Number	Filing Date
	-----	--	----	-----	-----
Main Patent	US 5439950	A	19950808	US 94266951	19940627
Priority				US 94266951	19940627

Abstract:

Non-hydrolyzable, hydrophilic, heterocyclic cross-linking agents for cross-linking vinyl comonomers are provided. The cross-linked copolymers

form optically transparent, high water content, and high refractive index hydrogels having long term stability which are useful as intraocular lenses and superabsorbents. The crosslinkers are selected from 4,6 divinyl pyrimidine, 2,5 divinyl pyrazine, 1,4 divinyl imidazole and 1,5 divinyl imidazole.

Document type: C

File 349:PCT FULLTEXT 1983-2002/UB=20020509,UT=20020502

File 654:US PAT.FULL. 1976-2002/May 07

S1 2 (INTRA()OCULAR OR INTRAOCULAR) ()LENS AND HYDROPHILIC()  
(CROSSLINKING OR CROSS()LINKING)

\*\*\*\*\*

5/6,K/4 (Item 4 from file: 155)

DIALOG(R) File 155:

07534029 93058512 PMID: 1432662

Loop memory of posterior chamber intraocular lenses of various sizes, designs, and loop materials.

Nov 1992

Looped intraocular lenses (IOLs) fixate by exerting centripetal pressure on the ocular tissues. The ability of the flexible loops to maintain pressure depends on their rigidity (i.e., resistance to flexion) and their "memory" (i.e., ability to restore original configuration...

... One-piece, all-PMMA lenses exhibited the best loop memory. These lenses have the high rigidity of the PMMA material and the good memory of the design. Thus, the total IOL...

5/6,K/5 (Item 5 from file: 155)

DIALOG(R) File 155:

07213601 92154749 PMID: 1786616

Use of intraocular lenses in cataract surgery in developing countries: memorandum from a WHO meeting.

1991

...World are unable to cope with both the backlog and new cases. Cataract extraction with intraocular lens (IOL) implantation is now the established and preferred method in industrialized countries. The introduction of...

...piece C-loop polymethylmethacrylate (PMMA) posterior chamber lens, which is the current favourite; and, the flexible or rigid one-piece all-PMMA anterior chamber lens, which is a valid alternative in many situations...

File 155:MEDLINE(R) 1966-2002/May W1

File 5:Biosis Previews(R) 1969-2002/May W1

File 8:Ei Compendex(R) 1970-2002/May W2

File 34:SciSearch(R) Cited Ref Sci 1990-2002/May W2

File 71:ELSEVIER BIOBASE 1994-2002/May W2

File 73:EMBASE 1974-2002/May W1

File 144:Pascal 1973-2002/May W2

File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec

S1 27 (INTRA()OCULAR OR INTRAOCULAR) ()LENS?? (S) FLEXIBLE(S) RIGID-  
???

S2 13 RD (unique items)

S3 3 S2/2002 OR S2/2001 OR S2/2000 OR S2/1999

S4 10 S2 NOT S3

S5 10 Sort S4/ALL/PY,D

\*\*\*\*\*

File 149:TGG Health&Wellness DB(SM) 1976-2002/May W1  
File 442:AMA Journals 1982-2002/May B2  
File 636:Gale Group Newsletter DB(TM) 1987-2002/May 13  
Set Items Description  
S1 6 (INTRA()OCULAR OR INTRAOCULAR)()LENS?? (S)FLEXIBLE(S)RIGID-  
???  
S2 6 RD (unique items)  
S3 1 S2/2002 OR S2/2001 OR S2/2000 OR S2/1999  
S4 5 S2 NOT S3  
S5 5 Sort S4/ALL/PD,D [not relevant]  
\*\*\*\*\*

2/7/3 (Item 3 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
(c) 2002 Thomson Derwent. All rts. reserv.  
011042380 \*\*Image available\*\*  
WPI Acc No: 1997-020304/199702  
Deformable intra-ocular lens for eye use - has deformable optical part having  
supports with series of having flexible table and rigid base  
Patent Assignee: CANON STAR CO LTD (CANO-N); CANON STAAR CO INC (CANO )  
Inventor: KIKUIKE T; NAKASHIMA T; KIKUCHI T; NAKAJIMA T  
Number of Countries: 002 Number of Patents: 003  
Patent Family:  
Patent No Kind Date Applicat No Kind Date Week  
US 5578078 A 19961126 US 94271834 A 19940707 199702 B  
US 5653754 A 19970805 US 94271834 A 19940707 199737  
US 95578912 A 19951227  
CN 1118446 A 19960313 CN 94115686 A 19940909 199743 N  
Priority Applications (No Type Date): JP 93175330 A 19930715; CN 94115686 A  
19940909  
Patent Details:  
Patent No Kind Lan Pg Main IPC Filing Notes  
US 5578078 A 5 A61F-002/16  
US 5653754 A 6 A61F-002/16 Div ex application US 94271834  
Div ex patent US 5578078  
CN 1118446 A G02C-007/04  
Abstract (Basic): US 5578078 A

The lens which does not deviate within the eye and is free from strains or deformation even when the tails of the supports are deformed by external force such as compression. The lens according to the invention has a deformable optical part which is made of an elastic material, and a plurality of supports which are made of a material different from that of the optical part and which are bonded to the optical part, each of the supports having, in a serial integration, a flexible tail.

A rigid base which cuts off the transmission of stress generated by the deformation of the tail to the optical part, and an anchor which binds the support to the optical part. The transitional part of the tail and the base is disposed outside the optical part. With this structure, even when the tails of the supports are deformed by external force, the tails themselves absorb the deformation stress and the rigid bases cut off transmission of the stress to the optical part.



ADVANTAGE - Does not cause deviation or decentralisation of optical part when the tails of supports are deformed by external.

Dwg.2/4

Abstract (Equivalent): US 5653754 A

A deformable intraocular lens having predetermined memory characteristics, comprises: an optical part having central and peripheral portions; and supports which each comprise a tail (2c), a rigid base (2a) and an anchor (2b). The anchor (2b) is connected to the optical part (1) of the lens; an end of the base closest to the optical part is located inside the peripheral portion of the anchor; the other end of the base protrudes from the optical part and is joined to the tail (2c) at a connection part which has a notch (2d).

USE - The structure prevents transmission of stresses to replacement intraocular lenses.

ADVANTAGE - The optical part of the lens does not deviate within the eye, or suffer from strain or deformation.

Dwg.3/4

Derwent Class: D22; P32; P81

International Patent Class (Main): A61F-002/16; G02C-007/04

File 350:Derwent WPIX 1963-2001/UD,UM &UP=200230

File 347:JAPIO Oct/1976-2001/Dec(Updated 020503)

S1 6 (INTRA()OCULAR OR INTRAOCULAR)()LENS?? (S)FLEXIBLE(S)RIGID-  
???

S2 6 IDPAT (sorted in duplicate/non-duplicate order)

\*\*\*\*\*

5/3,AB/2 (Item 2 from file: 348)

DIALOG(R)File 348:EUROPEAN PATENTS

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00728813

Intraocular lens

Intraokulare Linse

Lentille intraoculaire

PATENT ASSIGNEE:

IOVISION INC., (1232961), 34-B Mauchly Street, Irvine, California 92718,  
(US), (applicant designated states: AT;BE;CH;DE;FR;GB;IT;LI;LU;NL;SE)

INVENTOR:

Blake, Larry W., 10 Lexington, Irvine, California 92720, (US)

LEGAL REPRESENTATIVE:

Maury, Richard Philip et al (52806), Sommerville & Rushton, 45 Grosvenor  
Road, St. Albans, Herts AL1 3AW, (GB)

PATENT (CC, No, Kind, Date): EP 687549 A2 951220 (Basic)  
EP 687549 A3 960918

APPLICATION (CC, No, Date): EP 95113228 890927;

PRIORITY (CC, No, Date): US 262985 881026

DESIGNATED STATES: AT; BE; CH; DE; FR; GB; IT; LI; LU; NL; SE

RELATED PARENT NUMBER(S) - PN (AN):

EP 440685 (EP 899114581)

INTERNATIONAL PATENT CLASS: A61F-002/16

ABSTRACT EP 687549 A3

An intraocular lens comprising an optical element made of silicone,  
said element comprising a substantially aspherical sector.

ABSTRACT WORD COUNT: 26

LANGUAGE (Publication,Procedural,Application): English; English; English  
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	EPAB95	95
SPEC A	(English)	EPAB95	8755
Total word count - document A			8850
Total word count - document B			0
Total word count - documents A + B			8850

5/3,AB/4 (Item 4 from file: 348)

DIALOG(R)File 348:EUROPEAN PATENTS

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00579470

INTRAOCULAR LENS WITH HAPTIC ANCHOR PLATE

INTRAOKULARE LINSE MIT EINER HAPTISCHEN VERANKERUNGSPLATTE

LENTILLE INTRAOCULAIRE POURVUE D'UNE PLAQUETTE D'ANCRAGE HAPTIQUE

PATENT ASSIGNEE:

MEDEVEC LICENSING B.V., (2367320), Koningslaan 34, 1075 AD Amsterdam,

(NL), (applicant designated states: DE;ES;FR;GB;IT)

INVENTOR:

Cumming, J. Stuart, 1211 West La Palma Avenue, Suite 201, Anaheim,

California 92801, (US)

LEGAL REPRESENTATIVE:

Molyneaux, Martyn William et al (34016), c/o Ladas & Parry, 52-54 High

Holborn, London WC1V 6RR, (GB)

PATENT (CC, No, Kind, Date): EP 587565 A1 940323 (Basic)

EP 587565 A1 950222

EP 587565 B1 980819

WO 9221304 921210

APPLICATION (CC, No, Date): EP 92904476 910606; WO 91US4001 910606

PRIORITY (CC, No, Date): EP 92904476 910606; WO 91US4001 910606

DESIGNATED STATES: DE; ES; FR; GB; IT

INTERNATIONAL PATENT CLASS: A61F-002/16; A61L-027/00;

NOTE: No A-document published by EPO

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	9834	757
CLAIMS B	(German)	9834	711
CLAIMS B	(French)	9834	664
SPEC B	(English)	9834	3163
Total word count - document A			0
Total word count - document B			5295
Total word count - documents A + B			5295

5/3,AB/6 (Item 6 from file: 348)

DIALOG(R)File 348:EUROPEAN PATENTS

(c) 2002 European Patent Office. All rts. reserv.

00411575

FABRICATION OF AN INTRAOCULAR LENS

VERFAHREN ZUR HERSTELLUNG EINER INTRAOKULAREN LINSE

FABRICATION D'UNE LENTILLE INTRAOCULAIRE

PATENT ASSIGNEE:

IOVISION INC., (1232961), 34-B Mauchly Street, Irvine, California 92718,

(US), (applicant designated states: AT;BE;CH;DE;FR;GB;IT;LI;LU;NL;SE)

INVENTOR:

BLAKE, Larry, W., 10 Lexington, Irvine, CA 92720, (US)  
LEGAL REPRESENTATIVE:  
Maury, Richard Philip et al (52806), Sommerville & Rushton, 45 Grosvenor  
Road, St. Albans, Herts AL1 3AW, (GB)  
PATENT (CC, No, Kind, Date): EP 440685 A1 910814 (Basic)  
EP 440685 A1 911113  
EP 440685 B1 970806  
WO 9004512 900503  
APPLICATION (CC, No, Date): EP 89911458 890927; WO 89US4214 890927  
PRIORITY (CC, No, Date): US 262985 881026  
DESIGNATED STATES: AT; BE; CH; DE; FR; GB; IT; LI; LU; NL; SE  
INTERNATIONAL PATENT CLASS: B29D-011/00; A61F-002/16;  
NOTE: No A-document published by EPO  
LANGUAGE (Publication,Procedural,Application): English; English; English  
FULLTEXT AVAILABILITY:  
Available Text Language Update Word Count  
CLAIMS B (English) 9708W1 518  
CLAIMS B (German) 9708W1 483  
CLAIMS B (French) 9708W1 593  
SPEC B (English) 9708W1 9088  
Total word count - document A 0  
Total word count - document B 10682  
Total word count - documents A + B 10682

5/3,AB/7 (Item 7 from file: 348)  
DIALOG(R) File 348:EUROPEAN PATENTS  
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00368112

**Accommodating intraocular lens.**

Akkommodierende intraokulare Linse.

Lentille intra-oculaire accommodable.

**PATENT ASSIGNEE:**

STORZ INSTRUMENT COMPANY, (1132540), 3365 Tree Court Industrial Boulevard  
, St Louis Missouri 63122, (US), (applicant designated states:  
CH;DE;ES;FR;GB;IT;LI;NL)

**INVENTOR:**

Christie, Bruce Arthur, 2001 Bellingham Court, Newporte-Richey Florida  
33552, (US)

McMaster, Brian Monroe, 222 Los Prados Drive, Safety Harbor Florida 34695,  
(US)

Blaker, Warren J., 3117 Palisade Avenue, Bronx New York 10463, (US)

**LEGAL REPRESENTATIVE:**

Williams, Trevor John et al (37751), J.A. KEMP & CO. 14 South Square  
Gray's Inn, London WC1R 5EU, (GB)

PATENT (CC, No, Kind, Date): EP 356050 A1 900228 (Basic)  
EP 356050 B1 920826

APPLICATION (CC, No, Date): EP 89307952 890804;

PRIORITY (CC, No, Date): US 232600 880815

DESIGNATED STATES: CH; DE; ES; FR; GB; IT; LI; NL

INTERNATIONAL PATENT CLASS: A61F-002/16;

ABSTRACT EP 356050 A1

An accommodating intraocular lens apparatus preferably includes a lens member (50) having a relatively flexible portion and a relatively rigid portion, with a fluid-filled chamber (56) therebetween. The preferred intraocular lens also includes a hydraulic or other fluid accommodation provision for changing the shape or position of the

flexible lens by changing the fluid pressure in the fluid-filled chamber in response to muscle movement of the eye.

ABSTRACT WORD COUNT: 71

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	EPBBF1	1503
CLAIMS B	(German)	EPBBF1	1429
CLAIMS B	(French)	EPBBF1	1695
SPEC B	(English)	EPBBF1	4159
Total word count - document A			0
Total word count - document B			8786
Total word count - documents A + B			8786

5/3,AB/8 (Item 8 from file: 348)

DIALOG(R)File 348:EUROPEAN PATENTS

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00362392

Intraocular lens.

Intraokulare Linse.

Lentille intra-oculaire.

PATENT ASSIGNEE:

MINNESOTA MINING AND MANUFACTURING COMPANY, (300410), 3M Center, P.O. Box 33427, St. Paul, Minnesota 55133-3427, (US), (applicant designated states: CH;DE;FR;GB;IT;LI;NL;SE)

INVENTOR:

Knoll, Randall L. c/o Minnesota Mining and, Manufacturing Company, St. Paul Minnesota 55144-10000, (US)

Aysta, James E. c/o Minnesota Mining and, Manufacturing Company, St. Paul Minnesota 55144-1000, (US)

Lewon, Wilhelm c/o Minnesota Mining and, Manufacturing Company, St. Paul Minnesota 55144-1000, (US)

LEGAL REPRESENTATIVE:

Baillie, Iain Cameron et al (27951), c/o Ladas & Parry Isartorplatz 5, D-8000 Munchen 2, (DE)

PATENT (CC, No, Kind, Date): EP 333348 A1 890920 (Basic)

APPLICATION (CC, No, Date): EP 89302088 890302;

PRIORITY (CC, No, Date): US 168394 880315

DESIGNATED STATES: CH; DE; FR; GB; IT; LI; NL; SE

INTERNATIONAL PATENT CLASS: A61F-002/16;

ABSTRACT EP 333348 A1

Disclosed is an intraocular lens (1) comprising a lens element (2) and a plurality of haptics (6, 7) extending therefrom, at least one of the haptics (6, 7) having an anchoring filament (10, 12) with an enlarged complete or partial mushroom-shaped end (9, 13) fixedly disposed inside a passage (14, 15) in the lens element (2). Also disclosed is a method for fixing a haptic (6, 7) having an anchoring filament (10, 12) to a lens element (2) in a soft intraocular lens (1) comprising the steps of a) forming in the lens element (2) a passage (14, 15) having a width that is less than the greatest width of the anchoring filament (10, 12), b) lubricating the anchoring filament (10, 12) of the haptic (6, 7), the passage (14, 15) in the lens element (2), or both, c) inserting the anchoring filament (10, 12), end-first into the passage (14, 15), and d) washing the intraocular lens (1) to remove the lubricant.

ABSTRACT WORD COUNT: 166

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	EPABF1	471
SPEC A	(English)	EPABF1	5200
Total word count - document A			5671
Total word count - document B			0
Total word count - documents A + B			5671

5/3,AB/9 (Item 9 from file: 348)

DIALOG(R) File 348:EUROPEAN PATENTS

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00268398

A soft intraocular lens.

Weiche intraokulare Linse.

Lentille intraoculaire souple.

PATENT ASSIGNEE:

IOLAB CORPORATION, (620751), 500 Iolab Drive, Claremont, California  
91711-4881, (US), (applicant designated states: DE;FR;GB;IT)

INVENTOR:

Smith, Gregory M., 2343 S. Blue Haven Drive, Rowland Heights, CA 91748, (US)

LEGAL REPRESENTATIVE:

Jones, Alan John et al (32391), CARPMAELS & RANSFORD 43 Bloomsbury Square  
, London, WC1A 2RA, (GB)

PATENT (CC, No, Kind, Date): EP 255759 A1 880210 (Basic)  
EP 255759 B1 910925

APPLICATION (CC, No, Date): EP 87305836 870701;

PRIORITY (CC, No, Date): US 881163 860702

DESIGNATED STATES: DE; FR; GB; IT

INTERNATIONAL PATENT CLASS: A61F-002/16;

ABSTRACT EP 255759 A1

A soft intraocular lens suitable for placement in the anterior or posterior chamber and either in or out of the capsular bag. The lens has a fenestrated haptic defined by an arcuate member including a tissue contact portion, beam portions and support portions which acting together keep the lens in contact with the eye during distortion and tend to cause the lens to vault posteriorly when compressed.

ABSTRACT WORD COUNT: 71

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	EPBBF1	1673
CLAIMS B	(German)	EPBBF1	572
CLAIMS B	(French)	EPBBF1	710
SPEC B	(English)	EPBBF1	3080
Total word count - document A			0
Total word count - document B			6035
Total word count - documents A + B			6035

5/3,AB/10 (Item 10 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT

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00426742

SELF-CENTERING PHAKIC INTRAOCULAR LENS

LENTILLE INTRA-OCULAIRE PHAKIQUE A AUTO-CENTRAGE

Patent Applicant/Assignee:

INTERNATIONAL VISION INC,

Inventor(s):

VALUNIN Igor,  
ROZAKIS George W,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9817205 A1 19980430

Application: WO 97US19317 19971023 (PCT/WO US9719317)

Priority Application: US 9629103 19961024; US 9629341 19961031

Designated States: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES

FI GB GE GH HU IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN

MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZW

GH KE LS MW SD SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH DE DK ES FI

FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN ML MR NE SN TD TG

Publication Language: English

Fulltext Word Count: 6588

English Abstract

The invention is a phakic intraocular lens (IOL) for the correction of visual disorders such as myopia, hyperopia, astigmatism and presbyopia. The lens is made from a biocompatible, elastomeric material such as silicone. The lens further includes one or more annular surfaces that protrude from the anterior surface of the lens or surround the lens such that when placed in the eye, it makes contact with the iris. As the iris dilates and constricts, the contact with the iris places a centering force on the implanted lens. The lens is not in contact with the natural lens of the eye and floats in the posterior chamber without insult or abrasion to surrounding tissue.

5/3,AB/11 (Item 11 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

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00386100

MULTIFOCAL OPHTHALMIC LENS

LENTILLES CORRECTRICES A PLUSIEURS FOYERS

Patent Applicant/Assignee:

ALLERGAN,

Inventor(s):

PORTNEY Valdemar,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9726843 A1 19970731

Application: WO 97US929 19970122 (PCT/WO US9700929)

Priority Application: US 96592752 19960126

Designated States: JP AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE

Publication Language: English

Fulltext Word Count: 3996

English Abstract

A multifocal ophthalmic lens, having outer annular zones with vision correction powers less than a far vision correction power of the patient, is disclosed. These additional annular zones come into play, when the pupil size increases under dim lighting conditions, to thereby compensate for the additional near-vision powered annular zones introduced by the enlarged pupil size. The net effect of the additional near vision annular zones and the additional annular zones having power less than the far vision correction power is to shift the best quality image from in front of the retina to an area on the retina of the eye, to thereby reduce halo effects and improve contrast.

5/3,AB/12 (Item 12 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT

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00342614

ACCOMMODATING INTRAOCULAR LENS HAVING T-SHAPED HAPTICS

LENTILLE INTRAOCULAIRE D'ACCOMMODATION PRESENTANT DES PARTIES HAPTQUES EN  
FORME DE T

Patent Applicant/Assignee:

CUMMING J Stuart,

Inventor(s):

CUMMING J Stuart,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9625126 A1 19960822

Application: WO 96US1652 19960208 (PCT/WO US9601652)

Priority Application: US 95388735 19950215

Designated States: CA JP AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE

Publication Language: English

Fulltext Word Count: 11251

English Abstract

An accommodating intraocular lens (32) having T-shaped haptic (36) extending from diametrically opposite edges of an optic (34) for implantation within a capsular bag (20) within an eye (10) having a posterior capsule (24) and an anterior capsule remnant (22) forming an anterior capsule opening (26) surrounded by an anterior capsular rim (22). The lens (32) is placed in the bag (20) with the outer haptic T ends (36b) between the capsular rim (22) and the posterior capsule (24) to accurately center the lens (32) in the bag (20). Fibrosis occurs about the T ends (36b) to fixate them in the bag (20) and about haptic plate portions narrower than the optic diameter between the optic (34) and the T ends (36b) and to form haptic pockets (25) containing the haptic plate portions so that natural contraction and relaxation of the ciliary muscle effects vision accommodation movement of the optic (34). One embodiment has thickened, contoured haptic (202) which slide, upon ciliary muscle contraction, relative to the posterior capsule (24) to provide enhanced anterior movement of the optic (34) for accommodation.

5/3,AB/14 (Item 14 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT

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00333223

ACCOMMODATING INTRAOCULAR LENS IMPLANT

IMPLANTATION D'UN CRISTALLIN ARTIFICIEL PERMETTANT L'ACCOMMODATION

Patent Applicant/Assignee:

ACUITY (ISRAEL) LIMITED,

ISRAEL Henry M,

Inventor(s):

ISRAEL Henry M,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9615734 A2 19960530

Application: WO 95US14555 19951121 (PCT/WO US9514555)

Priority Application: IL 111713 19941121

Designated States: AM AT AU BB BG BR BY CA CH CN CZ DE DK EE ES FI GB GE HU

IS JP KE KG KP KR KZ LK LR LT LU LV MD MG MN MW MX NO NZ PL PT RO RU SD

SE SG SI SK TJ TM TT UA UG US UZ VN KE LS MW SD SZ UG AT BE CH DE DK ES

FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN ML MR NE SN TD TG

Publication Language: English

Fulltext Word Count: 14106

English Abstract

An intraocular lens assembly for implantation in a human eye, said eye including a ciliary muscle and zonules controlled by the ciliary muscle, the assembly including: an optic having anterior and posterior surfaces depending from a common edge; at least two, preferably rigid, linkage arms, each being attached to the optic at a first position on the arm thereof and cooperating with ciliary muscle or the zonules at a second position on the arm; and at least two pivots, one of which is rotatably attached to each respective linkage arm intermediate the first and second positions.

5/3,AB/15 (Item 15 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
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00288910

**SINGLE-PIECE INTRAOCULAR LENS WITH A RADIUSED TRANSITION REGION**  
**LENTILLE INTRAOCULAIRE MONOBLOC A REGION DE TRANSITION ARRONDIE**

Patent Applicant/Assignee:

IOVISION INC,

Inventor(s):

BLAKE Larry W,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9507059 A2 19950316

Application: WO 94US9792 19940830 (PCT/WO US9409792)

Priority Application: US 93117407 19930903

Designated States: AU CA JP AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE

Publication Language: English

Fulltext Word Count: 17933

English Abstract

An improved single-piece flexible intraocular lens (420) with a radiused transition region (422) between a lens element (424) and a winged support portion (426) of the intraocular lens (420). The radiused transition region (422) is formed by a fillet portion (428). The fillet portion (428) is used to reinforce the re-entry angle formed by the intersection of the lens element (424) and the winged haptic portion (426). The fillet portion (428) is incorporated into the lens junction to reduce the stress on the intraocular lens (420) which occurred at the sharp transition corner of prior art lenses. A preferred radius for the transition region (422) is between 0.01 mm and 0.25 mm. The single-piece lens (420) with the transition region (422) having a fillet (428) between the optical element (424) and the winged haptic (426) is preferably formed by a single-piece mold (440) to provide the most control over the radius of the transition portion (422).

5/3,AB/16 (Item 16 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
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00240655

**INTRAOCULAR LENSES, FIXATION MEMBER ASSEMBLIES AND METHODS FOR MAKING SAME**  
**LENTILLES INTRAOCULAIRES, ENSEMBLES D'ELEMENTS DE FIXATION ET LEURS**  
**PROCEDES DE FABRICATION**

Patent Applicant/Assignee:

ALLERGAN INC,

Inventor(s):

CHRIST F Richard,

FRANCESE James F,



GRISONI Bernard F,  
Patent and Priority Information (Country, Number, Date):  
Patent: WO 9314924 A1 19930805  
Application: WO 93US850 19930121 (PCT/WO US9300850)  
Priority Application: US 92824556 19920123  
Designated States: AU CA JP AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE  
Publication Language: English  
Fulltext Word Count: 7987  
English Abstract

New intraocular lenses, fixation member assemblies for use in such lenses and methods for making the same are disclosed. In one embodiment, the present invention involves a method for producing a fixation member assembly which comprises exposing a fixation member component to a first plasma at conditions effective to enhance, relative to a substantially identical fixation member component which is not subjected to the exposing step, the bondability between the fixation member component and a polymeric coating to be located on the fixation member component; and exposing the fixation member to a second plasma in the presence of at least one material selected from polymeric components, polymerizable components and mixtures thereof at conditions effective to form the polymeric coating located on the fixation member component. Enhanced bondability between the polymeric coating-containing fixation member component and the optic of the intraocular lens and/or enhanced biocompatibility are preferably provided.

5/3,AB/17 (Item 17 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
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00213764  
INTRAOCULAR LENSES WITH GRADIENT-REFRACTION INDEX  
LENTILLES INTRA-OCULAIRES AVEC INDICE DE REFRACTION A GRADIENT  
Patent Applicant/Assignee:  
EASTMAN KODAK COMPANY,  
Inventor(s):  
HAMBLEN David P,  
Patent and Priority Information (Country, Number, Date):  
Patent: WO 9210980 A1 19920709  
Application: WO 91US9079 19911210 (PCT/WO US9109079)  
Priority Application: US 90893 19901219  
Designated States: AT BE CH DE DK ES FR GB GR IT JP LU MC NL SE  
Publication Language: English  
Fulltext Word Count: 4921  
English Abstract

The present invention relates to implants (22, 70, 90, 170) (intraocular lenses) for implantation in the human eyeball (20) to replace the natural crystalline lens. In general, the implant (22) includes a body (50) which includes anterior (52) and posterior (54) surfaces, an axis (58), and a periphery. The body (50) is formed of a transparent material having an index of refraction which varies with a predetermined profile from the axis (58) to the periphery of the body (50). In a first embodiment, the body (50) is formed of one element having a convex-convex shape and an index of refraction which decreases in the direction away from the axis (58) of the body (50). For dual-focus capabilities, the body (71) has an inner (76) and an outer zone with separate gradient profiles and surface curvatures, or an inner zone (76) which is offset from the axis (78) and is the center of the gradient profile. The inner (76) and outer zones

provide focusing for nearby and distant objects respectively. In a second embodiment, the implant (170) includes an achromatic doublet lens (172) of first (174) and second (176) contacting elements formed of a transparent material. The transparent materials of the first (174) and second (176) elements have gradient indices of refraction which decrease in opposite directions from each other between the axis (180) to the periphery of the lens. Haptics (56) extend from the periphery of each implant (22, 70, 90, 170) for engagement with appropriate portions of the eyeball (20).

5/3,AB/18 (Item 18 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
(c) 2002 WIPO/Univentio. All rts. reserv.  
00208547  
VARIABLE FOCUS LENS  
CRISTALLIN A VALEUR REFRINGENTE VARIABLE  
Patent Applicant/Assignee:  
WILEY Robert G,  
Inventor(s):  
WILEY Robert G,  
Patent and Priority Information (Country, Number, Date):  
Patent: WO 9205750 A1 19920416  
Application: WO 91US6760 19910918 (PCT/WO US9106760)  
Priority Application: US 9086 19901009  
Designated States: AT BE CA CH DE DK ES FR GB GR IT JP LU NL SE  
Publication Language: English  
Fulltext Word Count: 7981  
English Abstract

A variable focus lens apparatus (32) includes a transparent, generally circular envelope (34), a transparent gel (36) having a relatively high resistance to flow encased in the envelope, and a plurality of light refractive particles (38) suspended in a predetermined orientation in the gel. When an external force field (44) is applied to the lens apparatus, the selectively focusable particles are responsive for changing to a new orientation with respect to said envelope for selectively adjusting characteristics of the lens apparatus including at least one of the characteristics of power and astigmatism correction, whereby upon removal of the external force, the particles remain in the new orientation within the gel. A control system (80) for controlling at least one of the strength and duration of the force field applied to the particles is connected to coils (58, 60) and a power supply (54) for generating the force field.

5/3,AB/20 (Item 20 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
(c) 2002 WIPO/Univentio. All rts. reserv.  
00203517  
INTRAOCULAR LENS AND METHOD FOR MAKING SAME  
LENTILLE INTRA-OCULAIRE ET PROCEDE DE FABRICATION DE LADITE LENTILLE  
Patent Applicant/Assignee:  
ALLERGAN INC,  
Inventor(s):  
CHRIST F Richard,  
FENCIL David A,  
KNIGHT Patricia M,  
Patent and Priority Information (Country, Number, Date):

Patent: WO 9200708 A1 19920123  
Application: WO 91US4028 19910607 (PCT/WO US9104028)  
Priority Application: US 90859 19900703  
Designated States: AT AU BE BR CA CH DE DK ES FR GB GR IT JP LU NL SE  
Publication Language: English  
Fulltext Word Count: 9500

English Abstract

Disclosed is a method for producing an intraocular lens (21) including an optic (26) and at least one haptic (28). In one embodiment the method comprises: exposing the lens bonding region (34) of the haptic (28) to a plasma at conditions effective to enhance the bondability of the lens bonding region (34) to the optic (26); and bonding the exposed lens bonding region (34) to an optic (26). The plasma exposed haptic (28) may be coated with a material, e.g., to preserve the enhanced bondability property, prior to bonding the coated lens bonding portion to the optic (26). Intraocular lenses (21) having enhanced haptic-optic bonding are also disclosed.

5/3,AB/22 (Item 22 from file: 349)  
DIALOG(R) File 349:PCT FULLTEXT  
(c) 2002 WIPO/Univentio. All rts. reserv.  
00163193

ONE-PIECE BIFOCAL INTRAOCULAR LENS CONSTRUCTION  
STRUCTURE DE LENTILLE INTRAOCULAIRE BIFOCAL EN UNE SEULE PIECE

Patent Applicant/Assignee:

SCHNEIDER Richard T,  
KEATES Richard H,

Inventor(s):

SCHNEIDER Richard T,  
KEATES Richard H,

Patent and Priority Information (Country, Number, Date):

Patent: WO 8909576 A1 19891019  
Application: WO 89US1407 19890404 (PCT/WO US8901407)  
Priority Application: US 88253 19880415; US 89966 19890117  
Designated States: AT AT AU BB BE BF BG BJ BR CF CG CH CH CM DE DE DK FI FR  
GA GB GB HU IT JP KP KR LK LU LU MC MG ML MR MW NL NL NO RO SD SE SE SN  
SU TD TG

Publication Language: English

Fulltext Word Count: 6763

English Abstract

A rigid bifocal intraocular lens (60) for use as an artificial lens implant is disclosed. In one embodiment, the intraocular lens has a rigid lens body (61) having a chord (61a) and first and second lens portions (62) and (63). The first lens portion (61) has a focal length and the second lens portion (63) has a focal length different from the focal length of the first lens portion (62). The first lens portion (62) is positioned on one side of the chord (61a) and the second lens portion (63) is positioned on the other side of the chord (61a). The first and second lens portions (62 and 63) form an integral, one-piece optical lens body (61) with the first and second lens portions being non-movable with respect to one another. In another embodiment the rigid lens body has a first central circular lens portion and a second outer annular lens portion. In a preferred form of this embodiment the inner, circular lens has a diameter of between about 1.8 millimeters and about 2.0 millimeters, with the outer annular lens portion having a diameter of between about 6 millimeters and 7 millimeters. A preferred corrective

power for the lenses used in the above-referenced embodiments is between about +15 and about +25 diopters for a distance-viewing lens portion, and a corrective power for a near-viewing portion of between about +3 and +4 diopters greater than the corrective power of the distance-viewing portion. Preferably, the lens portions are formed from molding in a manner avoiding introduction of any substantial refractive index gradient in the lens material.

5/3,AB/23 (Item 23 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
(c) 2002 WIPO/Univentio. All rts. reserv.  
00162054  
INTRAOCULAR LENS WITH VARIABLE CIRCUMFERENCE ENCIRCLING HAPTIC  
LENTILLE INTRAOCULAIRE ENTOUREE D'ELEMENTS DE FIXATION ET DE CONTACT A  
CIRCONFERENCE VARIABLE  
Patent Applicant/Assignee:  
FEASTER Fred Thomason,  
Inventor(s):  
FEASTER Fred Thomason,  
Patent and Priority Information (Country, Number, Date):  
Patent: WO 8908434 A1 19890921  
Application: WO 89US703 19890222 (PCT/WO US8900703)  
Priority Application: US 88412 19880317  
Designated States: AT BE CH DE FR GB IT JP LU NL SE  
Publication Language: English  
Fulltext Word Count: 5367  
English Abstract

An intraocular lens includes a lens body (21) having a haptic (53, 53) for supporting the lens body (21) in a human eye. The haptic (53, 53) includes a surrounding portion (65, 65) adapted to engage tissue of a human eye and which extends at least 360 degrees around the axis (25) of the lens body (21) at a position spaced outward from the periphery (27) thereof. The haptic (53, 53) comprises a single haptic member (53) in one embodiment and a plurality of haptic members (53, 53) in another embodiment each comprising an inner connecting portion (61) having its inner end (63) joined to the periphery (27) of the lens body (21) and extending outward and then around or partially around the axis (25) of the lens body (21) forming surrounding portion (65) and having an outer portion with an outer end portion (67). In the case of a plurality of haptic members (53, 53), each haptic member (53) has an outer portion with its outer end portion (67) which overlaps an adjacent portion (65A) of another haptic member (53).

5/3,AB/24 (Item 24 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
(c) 2002 WIPO/Univentio. All rts. reserv.  
00126310  
POSTERIOR CHAMBER INTRAOCULAR LENS  
LENTILLE INTRAOCULAIRE SITUEE DANS LA CHAMBRE POSTERIEURE  
Patent Applicant/Assignee:  
LENS S R L,  
EPSTEIN Robert H,  
VERZELLA Franco,  
Inventor(s):  
VERZELLA Franco,  
Patent and Priority Information (Country, Number, Date):

Patent: WO 8504566 A1 19851024  
Application: WO 85US573 19850404 (PCT/WO US8500573)  
Priority Application: IT 341384 19840405  
Designated States: BE DE DK FR GB JP NL SE US  
Publication Language: English  
Fulltext Word Count: 3155

English Abstract

An intraocular lens (10, 110) for implanting in the posterior chamber of an eye after extracapsular cataract extraction includes a flexible filament ring (24, 124) spaced from a lens body (12, 112) to engage the posterior capsule (134) and adhere thereto due to fibrosis attachment forming a barrier enclosing an optical zone behind the lens body (12, 112) to prevent migration of crystalline, epithelial cells from the perimeter of the posterior capsule (134) to the optical zone thereby preventing opacification.

5/3,AB/25 (Item 25 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
(c) 2002 WIPO/Univentio. All rts. reserv.  
00114529

INTRAOCULAR LENSES  
LENTILLES INTRAOCULAIRES  
Patent Applicant/Assignee:

COZEAN Charles H Jr,  
Inventor(s):

COZEAN Charles H Jr,  
Patent and Priority Information (Country, Number, Date):

Patent: WO 8302224 A1 19830707  
Application: WO 82US1733 19821214 (PCT/WO US8201733)  
Priority Application: US 81533 19811221  
Designated States: AT AU BE CH DE FR GB JP LU NL SE  
Publication Language: English  
Fulltext Word Count: 4037

English Abstract

A method of correcting aphakic conditions in human eyes and a novel intraocular lens structure (10a) for accomplishing such wherein the lens structure (10a) has a light focusing lens body optic (12a) with oppositely disposed support members (18a, 22a) and (20a, 24a) for supporting the lens structure (10a) upon implantation in the eye. The oppositely disposed support members (18a, 22a) and (20a, 24a) contact natural regions of the eye and position the optical axis (32a) of the light focusing lens (12a) at a point that is offset from the geometric center axis (30a) of the cornea whereby the optical axis (32a) corresponds with and is aligned with the pupillary axis of the eye.

File 348:EUROPEAN PATENTS 1978-2002/May W01

File 349:PCT FULLTEXT 1983-2002/UB=20020509,UT=20020502

S1 48 (INTRA()OCULAR OR INTRAOCULAR)()LENS?? (S)FLEXIBLE(S)RIGID-  
???

S2 21 S1/2002 OR S1/2001 OR S1/2000 OR S1/1999

S3 27 S1 NOT S2

S4 27 IDPAT (sorted in duplicate/non-duplicate order)

S5 25 IDPAT (primary/non-duplicate records only)

\*\*\*\*\*

L8 ANSWER 2 OF 6 HCAPLUS COPYRIGHT 2002 ACS  
AN 2001:936014 HCAPLUS  
DN 136:74696  
TI Method for the manufacture of molded polymeric devices using variable frequency microwaves

L8 ANSWER 4 OF 6 HCAPLUS COPYRIGHT 2002 ACS  
AN 1999:297250 HCAPLUS  
DN 130:343051  
TI \*\*\*Crosslinkable\*\*\* sulfone compound and an optical polymeric material employing it

L8 ANSWER 3 OF 6 HCAPLUS COPYRIGHT 2002 ACS  
ACCESSION NUMBER: 2001:152534 HCAPLUS  
DOCUMENT NUMBER: 134:212773  
TITLE: Homopolymers containing \*\*\*crosslinkers\*\*\* and ocular implants made therefrom  
INVENTOR(S): Liao, Xiuago; Gulati, Vijay  
PATENT ASSIGNEE(S): Medennium, Inc., USA  
SOURCE: PCT Int. Appl., 29 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001013972	A1	20010301	WO 2000-US23295	20000824
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6271281	B1	20010807	US 1999-383837	19990826
PRIORITY APPLN. INFO.: US 1999-383837 A 19990826				
AB Ocular implants composed of homopolymers contg. stable ***elasticity*** inducing ***crosslinkers*** which contain ***rigid*** chem. groups disposed between at least two polymerizable ethylenically unsatd. chem. groups are disclosed. These ocular implants are stable, ***elastic***, ***soft***, optically clear, have high refractive index and low-tack surfaces. ***Intraocular*** ***lenses*** were made by polymn. of ethylene glycol Ph ether acrylate, bisphenol A ethoxylate dimethacrylate, and 2-(4-benzoyl-3-hydroxyphenoxy)ethyl acrylate. The lenses were ***soft***, had refractive indexes as high as 1.559 with a glass transition temp. of around 5-10.degree..				
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT				

L8 ANSWER 5 OF 6 HCAPLUS COPYRIGHT 2002 ACS  
ACCESSION NUMBER: 1990:185856 HCAPLUS  
DOCUMENT NUMBER: 112:185856

TITLE: Acrylate copolymer-containing \*\*\*flexible\*\*\* ,  
\*\*\*elastic\*\*\* \*\*\*intraocular\*\*\* \*\*\*lenses\*\*\*  
PATENT ASSIGNEE(S): Ioptex Research, Inc., USA  
SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 01158949	A2	19890622	JP 1988-233368	19880917
JP 2930306	B2	19990803		
EP 308130	B1	19920506	EP 1988-308282	19880908
R: DE, FR, GB, IT				
CA 1330474	A1	19940705	CA 1988-577625	19880916
CA 1340128	A1	19981117	CA 1988-617090	19880916

PRIORITY APPLN. INFO.: US 1987-99293 19870917

AB Methacrylate esters, acrylate esters, and diacrylate esters (\*\*\*crosslinking\*\*\* agent) are copolymerized and made into title lenses that are \*\*\*hard\*\*\* but are relatively \*\*\*soft\*\*\* at body temp. Thus, Et methacrylate 34, Bu acrylate/Et acrylate 52, trifluoroethyl methacrylate 10, UV-2098 1.5, and USP-245 0.05% were mixed, defoamed, heated at 60.degree. for 2 h, cooled, and further mixed with ethylene glycol dimethacrylate .apprx.2.5 and USP-245 .apprx.0.1%. The mixt. then was defoamed, molded, heated at 60.degree. for 16 h and then at 90.degree. for 24 h, and cooled to 25.degree. to form the lens.

L8 ANSWER 6 OF 6 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1990:145601 HCAPLUS

DOCUMENT NUMBER: 112:145601

TITLE: \*\*\*Soft\*\*\* ocular lens and method for its preparation

INVENTOR(S): Ando, Ichiro; Kawaguchi, Toru

PATENT ASSIGNEE(S): Tomei Sangyo K. K., Japan

SOURCE: Eur. Pat. Appl., 29 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 318604	A1	19890607	EP 1987-117403	19871125
EP 318604	B1	19930310		

R: DE, FR, GB

AB A \*\*\*soft\*\*\* ocular lens, such as a \*\*\*soft\*\*\* contact lens, \*\*\*intraocular\*\*\* \*\*\*lenses\*\*\*, or artificial cornea, is prepd. by combining \*\*\*soft\*\*\* and \*\*\*hard\*\*\* polymers with \*\*\*crosslinking\*\*\* agents. The \*\*\*soft\*\*\* polymer is made from monomers such as 2-methoxyethyl acrylate, 1-methyl-2-methoxyethylacrylate, etc. Thus, a material for making a contact lens was prepd. by coating a cylindrical \*\*\*soft\*\*\* lens material (a Bu acrylate-ethylene glycol dimethacrylate copolymer) with a mixt. of Me methacrylate, dodecylmercaptan, and 2,2'-azobis(2,4-dimethylvarelonitrile).

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(FILE 'HOME' ENTERED AT 13:48:15 ON 15 MAY 2002)
FILE 'HCAPLUS' ENTERED AT 13:48:22 ON 15 MAY 2002
L1      879 S IOL OR IOLS OR (INTRA()OCULAR OR INTRAOCULAR)()LENS?
L2      212345 S CROSSLINK? OR CROSS()LINK
L3      208175 S (MODIFY? OR MODIFI? OR CHANG? OR ALTER? OR VARY? OR VARI?) (5A
L4      124 S L1 AND (L2 OR L3)
L5      463604 S FLEXIBLE OR ELASTIC? OR MALLEABLE OR PLIABLE OR SOFT OR BEND?
L6      257001 S RIGID OR STIFF OR HARD OR FIRM OR IMMALLEABLE OR IMPLIABLE OR
L7      132 S UNBEND? OR UNFLEXIBLE
L8      6 S L4 AND L5 AND (L6 OR L7)
*****
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# TITLES ONLY

36/6/3 (Item 3 from file: 155)

09669868 98073637 PMID: 9508739

Implantation of elastic intraocular lenses in traumatic cataracts]  
Sep-Oct 1997

36/6/4 (Item 4 from file: 155)

09607853 98013532 PMID: 9352278

Choice of surgical technique in the management of cataract combined with  
vitreous surgery.

Jul-Sep 1997

36/6/5 (Item 5 from file: 155)

09456956 97353747 PMID: 9209988

Silicone oil adhesion to intraocular lenses : an experimental study  
comparing various biomaterials.

May 1997

36/6/6 (Item 6 from file: 155)

08437589 95202128 PMID: 7894758

Uveitis-glaucoma-hyphema syndrome: a late complication of posterior  
chamber lenses.

1994

36/6/7 (Item 7 from file: 155)

08203782 94339043 PMID: 8060925

Increased prevalence of disciform macular degeneration after cataract  
extraction with implantation of an intraocular lens .

Jun 1994

36/6/10 (Item 10 from file: 155)

07430091 92364829 PMID: 1501087

Postsurgical inflammation after phacoemulsification and extracapsular  
extraction with soft or conventional intraocular lens implantation.

Jul 1992

36/6/11 (Item 11 from file: 155)

07213601 92154749 PMID: 1786616

Use of intraocular lenses in cataract surgery in developing  
countries: memorandum from a WHO meeting.

1991

36/6/12 (Item 12 from file: 155)

07131439 92065396 PMID: 1955985

Frown incision for minimizing induced astigmatism after small incision  
cataract surgery with rigid optic intraocular lens implantation.

1991

36/6/13 (Item 13 from file: 155)

07087865 92019599 PMID: 1923350

Retrobulbar hemorrhage.

Aug 1991

36/6/14 (Item 14 from file: 155)

06942461 91251024 PMID: 2040971

Visual acuity recovery rates following cataract surgery and implantation

of soft intraocular lenses .  
Mar 1991

36/6/15 (Item 15 from file: 155)  
06911305 91218355 PMID: 2023381  
Clinical results with soft intraocular lenses of poly-HEMA]  
Jan 1991

36/6/17 (Item 17 from file: 155)  
06369179 90061324 PMID: 2583784  
Anterior chamber intra ocular lens implantation.  
Apr-Jun 1989

36/6/19 (Item 19 from file: 155)  
06060428 89147005 PMID: 2919442  
Soft intraocular lenses ]  
Jan 30 1989

36/6/20 (Item 20 from file: 155)  
05698288 88118289 PMID: 3339544  
Minimal lift-multiple rotation technique for capsular bag  
phacoemulsification and intraocular lens fixation.  
Jan 1988

36/6/23 (Item 23 from file: 155)  
04286250 83276763 PMID: 6964242  
Current state of posterior chamber intraocular lenses after  
intracapsular and extracapsular cataract surgery.  
1981

36/6/26 (Item 1 from file: 144)  
11648620 PASCAL No.: 94-0502349  
Increased prevalence of disciform macular denegeration after cataract  
extraction with implantation of an intraocular lens  
1994

36/6/27 (Item 2 from file: 144)  
10138524 PASCAL No.: 92-0344278  
Anteroposterior shift in rigid and soft implants supported by the  
intraocular capsular bag  
1992

36/6/28 (Item 3 from file: 144)  
08997864 PASCAL No.: 90-0166046  
Pseudophakic accommodation? A study of the stability of capsular bag  
supported, one piece, rigid tripod, or soft flexible implants  
1990

36/6/29 (Item 1 from file: 5)  
07572774 BIOSIS NO.: 000091113328  
CLINICAL RESULTS WITH SOFT INTRAOCULAR LENSES MADE OF POLY-HEMA  
1991

36/6/30 (Item 2 from file: 5)  
03342207 BIOSIS NO.: 000072070311  
THE EVALUATION OF CORRECTION OF THE APHAKIC EYE BY MEASURING MODULATION  
TRANSFER FUNCTION OF THE HUMAN VISUAL SYSTEM

1981

36/6/34 (Item 1 from file: 73)

06233352 EMBASE No: 1995269564

Endothelial cell loss after 3.5 mm temporal clear corneal incision and  
3.5 mm superior scleral tunnel incision  
1995

36/6/35 (Item 2 from file: 73)

04192356 EMBASE No: 1990074898

A randomized prospective clinical comparison of HEMA (IOGEL(R)) and PMMA  
intraocular lenses  
1990

36/6/36 (Item 3 from file: 73)

02320418 EMBASE No: 1983251579

Interaction of soft and hard intraocular lenses with cat cornea  
endothelium. In vivo studies  
1982

36/6/37 (Item 4 from file: 73)

02046541 EMBASE No: 1982249751

Pars plana lensectomy by ultrasonic fragmentation  
1982

36/6/38 (Item 1 from file: 34)

06468686 Genuine Article#: YV348 Number of References: 23

Title: Endoscope-assisted brain surgery: Part 2 - Analysis of 380  
procedures (ABSTRACT AVAILABLE)

Publication date: 19980200

36/6/39 (Item 2 from file: 34)

05924560 Genuine Article#: XH164 Number of References: 22

Title: Double-pass measurements of retinal image quality in monofocal  
contact lens wearers (ABSTRACT AVAILABLE)

Publication date: 19970700

36/6/40 (Item 1 from file: 94)

03167730 JICST ACCESSION NUMBER: 97A0284169 FILE SEGMENT: JICST-E

Contact lense. 126. Morgagni's cataract. , 1997

36/6/41 (Item 2 from file: 94)

02389718 JICST ACCESSION NUMBER: 95A0825324 FILE SEGMENT: JICST-E

Deposition of a-C:H in a 200kHz CH4 plasma., 1994

36/6/42 (Item 3 from file: 94)

02377717 JICST ACCESSION NUMBER: 95A0551455 FILE SEGMENT: JICST-E

Therapeutic guidelines and outcome for intravitreally luxated nucleus  
during ultrasonic cataract surgery., 1995

36/6/45 (Item 2 from file: 35)

693068 ORDER NO: AAD80-17719

ANALYSIS OF SELECTED FACTORS RELATED TO THE ELDERLY PERSON'S ABILITY TO  
ADAPT TO VISUAL PROSTHESES FOLLOWING SENILE CATARACT SURGERY

Year: 1980

35/6/2 (Item 2 from file: 442)

00042042

Corneal Endothelial Changes Associated With Aphakic Extended Contact Lens Wear (CLINICAL SCIENCES )

LINE COUNT: 00171

WORD COUNT: 02360

35/6/3 (Item 3 from file: 442)

00032466

Corneal Edema Accompanying Aphakic Extended Lens Wear (CLINICAL SCIENCES )

LINE COUNT: 00213

WORD COUNT: 02950

33/26, TI/1 (Item 1 from file: 350)

DIALOG(R) File 350: Derwent WPIX

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014419942

WPI Acc No: 2002-240645/200229

Ophthalmic device as intraocular lens for implantation in eye by incision, is made from composition containing crystalline/semi-crystalline polymeric material having preset glass transition and melting temperature

33/26, TI/3 (Item 3 from file: 350)

DIALOG(R) File 350: Derwent WPIX

(c) 2002 Thomson Derwent. All rts. reserv.

013522699

WPI Acc No: 2001-006905/200101

Hydratable copolymer for use in ophthalmic devices such as intraocular lens, contact lens and keratoprostheses, comprises monomeric components

33/26, TI/6 (Item 6 from file: 350)

DIALOG(R) File 350: Derwent WPIX

(c) 2002 Thomson Derwent. All rts. reserv.

010711623

WPI Acc No: 1996-208578/199621

Artificial intra-ocular lens for surgical implantation to replace damaged natural lens - comprises cross-sectional dimension less than that of the natural lens and is composed of dry solid hydrophilic material capable of hydration by natural fluid

33/26, TI/7 (Item 7 from file: 350)

DIALOG(R) File 350: Derwent WPIX

(c) 2002 Thomson Derwent. All rts. reserv.

008654703

WPI Acc No: 1991-158730/199122

Prodn. of lens for contact lenses and artificial cornea, etc. - by forming centre part from acid resistant hard material and forming peripheral portion from soft material

33/26, TI/9 (Item 9 from file: 350)

DIALOG(R) File 350: Derwent WPIX

(c) 2002 Thomson Derwent. All rts. reserv.

007464568

WPI Acc No: 1988-098502/198814

Intra-ocular lens coated with vinyl-contg. silicone polymer - which is crosslinked and pref. contains medicament for controlled slow release

36/TI/1 (Item 1 from file: 350)

DIALOG(R) File 350: (c) 2002 Thomson Derwent. All rts. reserv.

Curing molded polymeric device for contact lenses, involves sweeping molds containing cavity with range of microwave frequencies at rate selected to avoid damage of mold and cured composition in mold

36/TI/2 (Item 2 from file: 350)

DIALOG(R)File 350:(c) 2002 Thomson Derwent. All rts. reserv.

Support tray for holding and transferring ophthalmic lenses to receiving tray, has position for supporting lenses and cavities for containing lenses so that edge of lens extends upwards in upper surface of tray

36/TI/3 (Item 3 from file: 350)

DIALOG(R)File 350:(c) 2002 Thomson Derwent. All rts. reserv.

Compositions for delivery of e.g. genetic material comprise triglyceride and carrier comprising at least two surfactants, at least one of which is hydrophilic, so as to form clear aqueous solution upon mixing with water

36/TI/4 (Item 4 from file: 350)

DIALOG(R)File 350:(c) 2002 Thomson Derwent. All rts. reserv.

Multifocal phakic intraocular lens has a baseline optical power and at least one optical add power for near vision

36/TI/5 (Item 5 from file: 350)

DIALOG(R)File 350:(c) 2002 Thomson Derwent. All rts. reserv.

Intraocular lens combinations has first optic with a negative optical power, a second optic having a higher positive optical power and a movement assembly

36/TI/6 (Item 6 from file: 350)

DIALOG(R)File 350:(c) 2002 Thomson Derwent. All rts. reserv.

New pyrazolone compounds and its keto-enol tautomers useful in the preparation of ophthalmic plastic lenses such as soft intraocular lenses

36/TI/7 (Item 7 from file: 350)

DIALOG(R)File 350:(c) 2002 Thomson Derwent. All rts. reserv.

Syringe for implanting supple intra - ocular lens has one-piece barrel connected by conical section to cylindrical tip

36/TI/8 (Item 8 from file: 350)

DIALOG(R)File 350:(c) 2002 Thomson Derwent. All rts. reserv.

Intraocular lens for providing bidirectional accommodating movement in the eye, has flexible movement piece set around optic to cooperate with eye movement and move optic anteriorly and posteriorly

36/TI/9 (Item 9 from file: 350)

DIALOG(R)File 350:(c) 2002 Thomson Derwent. All rts. reserv.

Eye lens having ultraviolet absorption property consists of organic polymer

36/TI/10 (Item 10 from file: 350)

DIALOG(R)File 350:(c) 2002 Thomson Derwent. All rts. reserv.

Focal length adjustment structure for intraocular lens attached to eye after cataract surgery - has hard magnetic material fixed to periphery of lens by injection sealing of viscoelastic fluid between polymer materials on lens side

36/TI/11 (Item 11 from file: 350)

DIALOG(R)File 350:(c) 2002 Thomson Derwent. All rts. reserv.  
Formation of coating on surface of medical device to prevent adverse biological reactions e.g. inflammation and thrombosis and increase device lifetime

36/TI/12 (Item 12 from file: 350)  
DIALOG(R)File 350:(c) 2002 Thomson Derwent. All rts. reserv.  
Solution for cleaning, soaking or storing contact lenses or ocular implants comprising a zwitterionic copolymer

36/TI/13 (Item 13 from file: 350)  
DIALOG(R)File 350:(c) 2002 Thomson Derwent. All rts. reserv.  
Process for preparing UV-protective tinted rigid contact ( intraocular ) lens - comprising subjecting starting mixture to polymerisation conditions in mould, recovering cylindrically-shaped polymer and forming polymer into several lenses

36/TI/14 (Item 14 from file: 350)  
DIALOG(R)File 350:(c) 2002 Thomson Derwent. All rts. reserv.  
Hard or soft contact lenses containing UV absorber(s) and colourant(s) - absorb all incident radiation up to 500 nm and have at least 80 per cent transmittance at 700-800 nm

36/TI/15 (Item 15 from file: 350)  
DIALOG(R)File 350:(c) 2002 Thomson Derwent. All rts. reserv.  
Modifying surface of plastic medical devices and implants - by applying a coating formed by gamma-irradiation induced polymerisation of selected monomer

36/TI/16 (Item 16 from file: 350)  
DIALOG(R)File 350:(c) 2002 Thomson Derwent. All rts. reserv.  
Deformable intra - ocular lens for eye use - has deformable optical part having supports with series of having flexible table and rigid base

36/TI/17 (Item 17 from file: 350)  
DIALOG(R)File 350:(c) 2002 Thomson Derwent. All rts. reserv.  
Hydrophilic article for use in aq. environments - comprises porous or particulate substrates with ionic polymeric layer and disordered polyelectrolyte coating, for use in e.g. ophthalmics, diagnostics and printing

36/TI/18 (Item 18 from file: 350)  
DIALOG(R)File 350:(c) 2002 Thomson Derwent. All rts. reserv.  
Intraocular lens - has coating of polyethylene oxide covalently bonded to polyacrylic lens through amine bonds for improved biocompatibility and protein resistance

36/TI/19 (Item 19 from file: 350)  
DIALOG(R)File 350:(c) 2002 Thomson Derwent. All rts. reserv.  
Attaching bio-molecule with carboxyl gps. to animated solid surface - by reacting with carbodiimide, covalently binding to solid surface, and selectively restoring carboxyl gps.

36/TI/23 (Item 23 from file: 350)  
DIALOG(R)File 350:(c) 2002 Thomson Derwent. All rts. reserv.  
Variable power intraocular lens with astigmatism correction - has

flexible lens body which is sensitive to external forces and outer ring of body can be altered

36/TI/24 (Item 24 from file: 350)

DIALOG(R)File 350:(c) 2002 Thomson Derwent. All rts. reserv.

Implantable intra - ocular lens - has hard inner lens optic and soft pliable skirt surrounding lens

36/TI/25 (Item 25 from file: 350)

DIALOG(R)File 350:(c) 2002 Thomson Derwent. All rts. reserv.

Hard intraocular lens with shape memory - is deformed into shape suitable for insertion into eye, to behave as hard lens

36/TI/26 (Item 26 from file: 350)

DIALOG(R)File 350:(c) 2002 Thomson Derwent. All rts. reserv.

Intra - ocular lens insertable through small incision - has soft foldable skirt around hard biconvex optic

36/TI/27 (Item 27 from file: 350)

DIALOG(R)File 350:(c) 2002 Thomson Derwent. All rts. reserv.

Mfg. non-hydrated type soft lens - by esterifying lens base formed from copolymer obtd. by polymerising monomers contg. ethylenic unsatd. carboxylic acid, etc.

36/TI/28 (Item 28 from file: 350)

DIALOG(R)File 350:(c) 2002 Thomson Derwent. All rts. reserv.

Soft ocular lenses prodn. - by room temp. machining of polymer blend contg. soft lens material and hard polymer, then removing hard polymer

36/TI/29 (Item 29 from file: 350)

DIALOG(R)File 350:(c) 2002 Thomson Derwent. All rts. reserv.

Variable focus intra - ocular lens implant - filled with fluid whose pressure is varied to vary the lens focus

36/TI/30 (Item 30 from file: 350)

DIALOG(R)File 350:(c) 2002 Thomson Derwent. All rts. reserv.

Semi-opaque cornea contact lens - mfd. by focusing laser beam inside to produce turbid annulus

36/TI/31 (Item 31 from file: 350)

DIALOG(R)File 350:(c) 2002 Thomson Derwent. All rts. reserv.

Intra - ocular lens - has no fixing or supporting members

36/TI/33 (Item 33 from file: 350)

DIALOG(R)File 350:(c) 2002 Thomson Derwent. All rts. reserv.

Grip for intra - ocular lenses - has linkage to hold lens firmly to be released when pressure is applied to handle

36/TI/34 (Item 34 from file: 350)

DIALOG(R)File 350:(c) 2002 Thomson Derwent. All rts. reserv.

intra - ocular lens deformable during insertion - permitting smaller incision in cornea

36/TI/36 (Item 36 from file: 347)

DIALOG(R)File 347:(c) 2002 JPO & JAPIO. All rts. reserv.

ACRYLIC COPOLYMER MATERIAL SUITABLE FOR OPHTHALMOLOGICAL INSTRUMENT

33/TI/1 (Item 1 from file: 348)  
DIALOG(R)File 348:(c) 2002 European Patent Office. All rts. reserv.  
Mold assembly for forming ophthalmic lens, method of producing the same, and  
method of producing ophthalmic lens using the mold assembly

33/TI/2 (Item 2 from file: 348)  
DIALOG(R)File 348:(c) 2002 European Patent Office. All rts. reserv.  
Mold assembly for forming ophthalmic lens

33/TI/3 (Item 3 from file: 348)  
DIALOG(R)File 348:(c) 2002 European Patent Office. All rts. reserv.  
Method of sterilizing intraocular lens by electron beam

33/TI/4 (Item 4 from file: 348)  
DIALOG(R)File 348:(c) 2002 European Patent Office. All rts. reserv.  
POLYETHYLENE OXIDE COATED INTRAOCULAR LENS

33/TI/7 (Item 7 from file: 348)  
DIALOG(R)File 348:(c) 2002 European Patent Office. All rts. reserv.  
Deformable-elastic intraocular lens.

33/TI/8 (Item 8 from file: 348)  
DIALOG(R)File 348:(c) 2002 European Patent Office. All rts. reserv.  
Deformable-elastic intraocular lens.

33/TI/9 (Item 9 from file: 349)  
DIALOG(R)File 349:(c) 2002 WIPO/Univentio. All rts. reserv.  
INTRAOCULAR LENS IMPLANTER

33/TI/11 (Item 11 from file: 349)  
DIALOG(R)File 349:(c) 2002 WIPO/Univentio. All rts. reserv.  
PROCESS FOR THE PREPARATION OF A DIOL

33/TI/12 (Item 12 from file: 349)  
DIALOG(R)File 349:(c) 2002 WIPO/Univentio. All rts. reserv.  
PROCESS FOR THE PREPARATION OF A DIOL

33/TI/14 (Item 14 from file: 349)  
DIALOG(R)File 349:(c) 2002 WIPO/Univentio. All rts. reserv.  
APPARATUS FOR IMAGING OF OCULAR TISSUE

33/TI/21 (Item 21 from file: 349)  
DIALOG(R)File 349:(c) 2002 WIPO/Univentio. All rts. reserv.  
DURABLE HYDROPHILIC SURFACE COATINGS

33/TI/22 (Item 22 from file: 349)  
DIALOG(R)File 349:(c) 2002 WIPO/Univentio. All rts. reserv.  
CROSS-LINKED POLYETHYLENE OXIDE COATINGS TO IMPROVE THE BIOCOMPATIBILITY OF  
IMPLANTABLE MEDICAL DEVICES

33/TI/24 (Item 24 from file: 349)  
DIALOG(R)File 349:(c) 2002 WIPO/Univentio. All rts. reserv.  
'SPARE PARTS' FOR OPHTHALMIC SURGICAL PROCEDURES

36/6/1 (Item 1 from file: 155)  
DIALOG(R)File 155:MEDLINE(R)



12909623 21866259 PMID: 11877166

The experimental study of Nd: YAG laser injuring effects on intraocular lenses made by different materials]

36/6/8 (Item 8 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

08108737 94260016 PMID: 8201169

Rigid gas permeable extended wear (RGPEW) for the postoperative patient: a review and clinical observations.

36/7/24 (Item 24 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

03723367 81279433 PMID: 7270655

Extended wear contact lenses for aphakia.

36/7/25 (Item 25 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

03301458 80121560 PMID: 394065

Hard contact lens corrections in aphakia.

40/6/2 (Item 2 from file: 16)

DIALOG(R)File 16:Gale Group PROMT(R)

(c) 2002 The Gale Group. All rts. reserv.

02018908 Supplier Number: 42594031 (THIS IS THE FULLTEXT)

Testing Equipment for Biomaterials, Lenses

36/6/37 (Item 37 from file: 347)

DIALOG(R)File 347:JAPIO

(c) 2002 JPO & JAPIO. All rts. reserv.

05679954 \*\*Image available\*\*

STRUCTURE OF INTRAOCULAR LENS AND FOCUS DISTANCE ADJUSTMENT METHOD

2/26,TI/4 (Item 4 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2002 Thomson Derwent. All rts. reserv.

008986755

WPI Acc No: 1992-114024/199214

Variable power intraocular lens with astigmatism correction - has flexible lens body which is sensitive to external forces and outer ring of body can be altered

2/26,TI/5 (Item 5 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2002 Thomson Derwent. All rts. reserv.

007358281

WPI Acc No: 1987-355287/198750

Posterior chamber intra-ocular lens for glaucoma and cataract - having two haptics on lens, at least one haptic having blocking segment preventing tissue occluding fistula

5/6/3 (Item 3 from file: 348)

DIALOG(R)File 348:EUROPEAN PATENTS

(c) 2002 European Patent Office. All rts. reserv.

00582388

MULTIFOCAL OPHTHALMIC LENS